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We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE *possesses the necessary permit and machinery for such dispatch, and any reader desirous of arranging for copies to be delivered to an agent or correspondent overseas should place the order with us together with the necessary delivery instructions.*

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TO CALLERS AND TELEPHONERS

Until further notice our office hours are:—
Mondays to Fridays - 9.30 *a.m. till* 5.0 *p.m.*
The office will be closed on Saturdays

The C.P.R. Outlook

IT appears probable that the factors which have accounted for the increases so far this year in freight and passenger earnings of the Canadian Pacific Railway will continue to prevail in the months immediately ahead. All indexes of employment and production continue to rise, and, while Canada's war effort will replace certain peacetime activities to an increasing extent, Sir Edward Beatty's recent statement said there was every indication that the transport requirements of the nation had not yet reached the maximum. However, due to the fact that the storage space throughout Canada will in all probability be fully occupied much earlier than last year, the movement of grain this autumn will no doubt be considerably restricted. For this reason Sir Edward Beatty said that the gross earnings of the C.P.R. in the latter part of the year were likely to compare less favourably with those of 1940 than during the earlier part of the year. Working expenses will increase with the greater volume of business. In addition to current repairs of roadbed structures and rolling stock, it is necessary with the growing traffic, to rehabilitate many facilities which in periods of low traffic do not require much attention. Provision for depreciation of rolling stock inaugurated last year on the basis of use, will increase in direct relation to the increases in locomotive and car mileage. Slightly higher prices and supplies are already in evidence, and heavier accruals will be required for Dominion income and excess profits taxes. However, it is expected that, in the immediate future at least, a moderate proportion of the increase in gross earnings will be converted into net earnings.

* * * *

B.A. Western Railway Moratorium

A striking reminder, if any were needed, of the parlous condition into which the British-owned railway companies in Argentina have fallen is provided by the announcement made by the directors of the Buenos Ayres Western Railway Limited that they have found it necessary to prepare a moratorium scheme postponing payment of interest due on July 1 next on the 4 per cent. and 5 per cent. debenture stocks, and 5 per cent. secured notes. This scheme will be submitted to meetings of the debenture stockholders and the noteholders, and, if approved by them, will then go before the High Court for sanction. Of the 4 per cent. debenture stock there is outstanding £9,872,203; of the 5 per cent. debenture stock £777,711; and of the secured notes £395,910. The last-named, after Court sanction of a scheme of arrangement in April, were issued in exchange for a similar amount of 4 per cent. unsecured three-year notes which matured on January 18 of this year. The notes now in issue are repayable by January 1, 1944, at par. Although in recent weeks traffic receipts of the Buenos Ayres Western Railway have shown some improvement there is still a decline of about three-quarters of a million pesos for the current year. Heavy exchange losses, competition from motor traffic on the State roads, and finally the highly unfavourable crop position in the Argentine, are having their effects on the finances of all the railway companies.

* * * *

The Slovak State Railways in 1940

Some information concerning the progress of the Slovak State Railways during last year was given recently in a speech by Herr Stano, the Slovak Minister of Transport & Public Works. He stated that the Slovak State Railways had suffered from an acute shortage of rolling stock and locomotives, but gave no information about what proportion of the affected stock had been "loaned" to Germany, although this figure is believed to be relatively high. During 1939 there were 14 new locomotives and 10 diesel railcars added to the stock of the Slovak State Railways; 6 locomotives were ordered in 1940, 15 so far in 1941, and another 6 are to be ordered in the course of the year. Orders for rolling stock in 1940 included 10 passenger carriages and 180 goods wagons, and in 1941 orders are to be placed for 20 passenger carriages and 560 goods vehicles. The Minister emphasised the great difficulty in obtaining deliveries of rolling stock. Expenditure for the erection and modernisa-

tion of stations in 1940 totalled 40,000,000 crowns, including those at Bratislava (the capital), Zvlolen, and Banska Bystrica. Construction of new railway repair shops at Vrutke required expenditures of 33,300,000 Slovak crowns. Total expenditures on the maintenance of the 2,545 km. (1,581 miles) of Slovak railway cost 180,000,000 crowns in 1939 and 1940. The Slovak crown has a nominal equivalent value of about 133 to the British £.

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Swiss Federal Railways in 1940

The importance of the Swiss Federal Railways to the Swiss national economy was further enhanced during 1940 by the rationing of petrol and the resultant withdrawal from operation of approximately one-half of the registered motor vehicles. Much of the passenger and freight traffic, formerly handled by motor carriers, was diverted to the railways. During 1940 some 119,700,000 passengers were carried, slightly more than in 1939. At fr. 135,450,000 receipts from this source were fr. 1,800,000 higher. Freight carried totalled roughly 20,000,000 *tonnes*, an increase of 3,000,000 *tonnes*. With the exception of a slight decline in the last two months of the year, freight figures were above the level of the corresponding months in 1939. Receipts from freight traffic increased by fr. 33,000,000 to fr. 247,000,000. Operating receipts were fr. 395,500,000, and operating expenditures fr. 230,000,000, leaving a gross profit of fr. 165,500,000, or fr. 15,800,000 more than in 1939, when, owing largely to the war, a net profit was reported for the first time since 1931. For 1940, the net profit is expected to be fr. 17,000,000.

* * * *

Branch Line Abandonment in U.S.A.

Branch lines abandoned by the railways of the United States totalled 1,299 miles in 1940 compared with 1,783 miles in 1939, according to figures compiled by Mr. George E. Boyd, Associate Editor of the *Railway Age*. This is the tenth year since the record of abandonments was first compiled that they have exceeded a thousand miles. The total abandonments for 1940 were 1,273 miles more than the mileage of new lines completed during the year. Much of the mileage was made up by small sections of undertakings which continue to work their main systems, but 13 entire railways were abandoned last year compared with 17 complete abandonments in 1939, which was the largest for any single year. Figures are not available for the years prior to 1917 as the railways abandoned from time to time up to that date were unimportant and usually were in sparsely-populated areas. Beginning with 1917, however, in which year 942 miles of the main lines were abandoned, the practice has continued on a large scale ever since, and the mileages involved in individual years have ranged from 282 in 1927 to 1,995 in 1934. During the 24-year period from 1917 to date a total of 25,191 miles has been abandoned, an average of more than 1,000 miles annually, while only 10,556 miles of new lines have been constructed.

* * * *

Danish State Railways under German Occupation

Particular interest attaches to some figures which have recently reached this country through American sources concerning the receipts of the Danish State Railways from the beginning of the fiscal year, April 1, 1940, to the end of December last, as this period of nine months coincides almost exactly with that of the German occupation of Denmark, that country having been invaded on April 9, 1940. During this period freight revenues of the Danish State Railways have increased by 50 per cent. compared with revenue during the corresponding nine months of the preceding year. This is stated to have been mainly on account of the heavy volume of goods that the railways have carried by reason of the curtailment of road motor competition, and the drastic decrease in shipping traffic between the various Danish ports. At the same time, the Danish State Railways have raised their rates considerably so that direct comparison of figures of receipts is largely nullified. Passenger traffic earnings during the same period of 1940 declined by approximately 8 per cent. when compared with the same period of the preceding year, and a similar decline was registered in the case of the transport of mail. The latest available data (in 1,000 kroner) are:—

	April to December 1939	1940
Passenger traffic	56,840	52,260
Freight	39,760	59,540
Mail	5,780	5,270
Other income	4,920	4,730
Total Income	107,300	121,800
Expenditures	95,540	111,190
Surplus	11,760	10,610
Writings-off	5,600	5,800
Servicing of debt	11,010	11,820
Government subsidies	4,750	7,010

* * * *

South American Railway Congress

The fourth South American Railway Congress was held in February last at Bogota, capital of the Republic of Colombia, when the primary business under consideration was a study of the law of co-ordination of transport as obtaining in Argentina. A survey was made of measures which might be adopted to meet the conditions resulting from unfair road competition with the railways and at the same time provide efficient transport to public and traders on a sound basis. The first of these congresses was held, on the initiative of the Argentine Republic, at Buenos Aires in 1910. The second, in 1922, was held at Rio de Janeiro, and the third, in 1929, at Santiago. The permanent commission has recently had under consideration a proposal to extend the scope of the congress by converting it into a Pan-American Railway Congress. The congresses are attended by representatives of railway administrations throughout South America and in the past have usually been accompanied by an exhibition of railway interest. In happier times no doubt the recent congress would have attracted greater attention outside the countries immediately concerned; the effect of the war has been felt on railways in every country of the world, and it was but natural that some part of the time of the congress should be taken in reviewing the present abnormal conditions.

* * *

Work of the Bogota Congress

One of those who attended the Bogota Congress was Dr. Guillermo E. Leguizamon, Chairman of the local boards of the Buenos Ayres Great Southern and Buenos Ayres Western Railway Companies. On his return to Buenos Aires he gave an interview to the *Times of Argentina* in the course of which he told something of the conditions which had come under his observation during his visit to several South American countries, and of the work of the congress. In Chile and Bolivia, he said, conditions were extremely bad because of acute road competition allied to a shortage of coal. The adverse conditions affecting the railways in all the countries represented had led to a close study of the methods being adopted in Argentina in an effort to combat like conditions, and there had been unanimous adoption of motions urging the co-ordination of all forms of transport. The congress had passed resolutions calling for co-ordination by means of a combination of the various branches of transport with a view to the elimination of uneconomic competition. Under this plan rates would be subject to equitable adjustment with a view to the provision of maximum benefit to the public at lowest cost to the operating combine. The congress also called for the repeal of laws restraining the free development of railways, the relaxation of control over charges, and sanction for the companies to enter into agreements and amalgamations among themselves as well as to put into effect schemes of collaboration with other forms of transport.

* * *

Fare Increase Anomalies

Percentage increases in small fares raise considerable practical difficulties, partly from the limitation of our currency and the impracticability today of using the odd farthing. To take extreme cases, the 1d. fare must be increased by 50 per cent. and the 2d. fare by 25 per cent. A further difficulty is that railway fares which are fixed according to distance must often of necessity take a station-to-station distance figure slightly above or below the actual one. For many years past British railway companies have used recog-

nised fractions rules, and since the outbreak of war further fractions rules have formed part of the Orders under which fares have been increased. In certain cases the summation of a number of fractions rules can result in penalising a particular passenger to a surprising extent, and a Letter to the Editor which we publish this week on page 569 demonstrates this very clearly. It shows for example that a 14·6 mile journey, which a passenger may reasonably have expected to cost the level 2s. 6d. for a " penny a mile " monthly return ticket, was brought up to 2s. 9d. by various fractions rules, and is now 3s. 5d., although a calculation on the actual mileage would still total slightly less than 3s. Another anomaly pointed out by our correspondent is that the present scale, as increased in December last, includes no ordinary fare between 2½d. and 4½d. although on a strict mathematical calculation (excluding fractions rules) it should be possible to travel up to 1·6 miles for 3d. and 2·1 miles for 4d. Moreover, the ordinary return fare for a journey of between 1½ and two miles each way has now been increased from 7d. to 9d. although 7½d. would more than cover the 5 per cent. and 16⅔ per cent. increases on the original 6d. fare. It seems unavoidable that fare increases should produce inequalities, but our correspondent's letter demonstrates the cumulative adverse effect of fractions rules in certain circumstances, and may prompt consideration of amendments if further changes are made.

* * * *

New Swiss Signal Aspects

With the introduction of their new large radius turnouts, allowing of high speed on the diverging route, the Swiss Federal Railways found it advisable to introduce additional signal aspects and, as briefly outlined at page 572 in this issue, the new official regulations came into force on October 6 last. The change has involved the adoption of a new indication, green over yellow, for use with old type points, the long-used double green aspect being now employed when a diverging movement is signalled over new type points, and is given exclusively by colour-lights. Four distinct aspects are thus called for in a junction home signal where both types of points exist. The route is not signalled, as such, but can in most places be inferred from the indication displayed. It is of interest that the distant signals can also now give four indications, and cover the two classes of diverging routes. These arrangements result in a great many lenses being needed in some signals and—to British ideas—peculiar combinations of lights. They appear, however, to meet the Swiss operating requirements very satisfactorily.

* * * *

Powerful Shunting Locomotives

Considerable use is made in the United States of large and powerful tender locomotives for shunting in concentration yards and similar duties, but in this country the bulk of this sort of work is performed by tank engines of various sizes and capacities. Where the work is unusually heavy, as in a large hump yard, the call is for locomotives possessing ample tractive effort, adhesion, and boiler power, and space in which to carry sufficient water and fuel so that the time spent in replenishing supplies can be reduced to the least possible. Examples of powerful eight-coupled tank engines employed for shunting in marshalling yards are to be found on British railways, noteworthy among them being the 0-8-0 type " Z " and 4-8-0 type " G16 " classes of the Southern, the former having three 16 in. by 28 in. cylinders and the latter two of 22 in. dia. by 28 in. stroke. The " Z " class engine carries 1,500 gallons of water and 3 tons of coal, and the " G16 " class 2,000 gallons of water and 3½ tons of coal, sufficient in both cases for reasonably long spells of duty without having to stop to replenish. The most powerful shunting or banking engine in this country has capacities much greater than either of these, having been designed for especially heavy service. This is the 3-cylinder " S1 " class of the L.N.E.R., which has the 0-8-4 wheel arrangement with a booster on the trailing bogie. The amounts of coal and water carried are respectively 6 tons and 2,680 gallons. The tractive effort at 85 per cent. of the boiler pressure is 34,523 lb., but with the booster this is increased to 46,896 lb.

The Railways of Syria

SYRIA is a geographical term for part of the former Turkish territories in Asia Minor often called the Levant States. Since the British forces occupied these parts in 1918 there have been both territorial and governmental changes, but the whole area now under French (Vichy) control may be considered conveniently as Syria, although it comprises various autonomous states under French mandate. These are Syria proper (the amalgamated states of Damascus and Aleppo), Grand Lebanon, Latakia, and Jebel Druze. All the railways in the area are worked by the Société Française du Chemin de fer Damas-Hama et Prolongements. The company's own system comprises the Aleppo—Rayak main line of 207½ miles, and its 63½ mile branch from Homs to Tripoli, both of standard gauge; and some 93 miles of 105 cm. (3 ft. 5¼ in.) gauge line between Beirut and Damascus, *via* Rayak, of which about 32 km. (roughly 20 miles) are equipped with rack rail on the Abt system. In addition, the company works the 153 miles of the Hedjaz Railway (3 ft. 5¼ in. gauge) on Syrian soil; about 100 miles of the former Baghdad Railway (4 ft. 8½ in. gauge); and the narrow-gauge Tramways Libanais from Beirut to Mameltein. The whole D.H.P. system thus totals about 625 miles.

France has had intimate commercial relations with Syria for many centuries, and a French company formed in 1865 was given a Turkish concession to transport passengers and goods by road between Damascus and Beirut. The enterprise prospered and was of considerable commercial importance, so it was natural that French interests should take up the question of railway communication. The Société des Chemins de fer ottomans économiques de Beyrouth-Damas-Hauran was established in Paris in 1891, and on June 13 of that year secured a Turkish Government Firman to build a 105 cm. (3 ft. 5¼ in.) gauge railway from Beirut to Damascus and on to Mezerib in the Hauran region. This line was opened on August 3 (July 22 old calendar), 1895, but five years later its value was seriously impaired by the decision of Abdul Hamid to build the Pilgrim or Hedjaz Railway from Damascus to Mecca, the northern part of which would parallel the Damascus—Mezerib section of the French railway. The Damascus—Amman portion of the Hedjaz Railway was opened on August 23, 1904, and at first relied for its outlet to the sea on the Beirut—Damascus section of the French company. The Hedjaz administration, however, became dissatisfied with this position and sought its own access to the Mediterranean by means of a branch from Deraa to the port of Haifa; this was completed in 1906.

In the north of Syria, the Beyrouth-Damas-Hauran Railway obtained in June, 1893, from the Turkish Government both permission to build a standard-gauge railway from Damascus to Homs, Hama, Aleppo, and Birijik (on the Euphrates), with a branch to the coast, and also the promise of guaranteed receipts. Before this was built the Government sanctioned the Baghdad Railway, a part of which route north-east of Aleppo clashed with that of the French company. The matter was eventually adjusted and the French undertaking, which changed its name to the Société ottomane du Chemin de fer Damas-Hama et Prolongements, built a standard-gauge railway from Rayak (on the Beirut—Damascus line) only as far as Aleppo, which was reached in 1906. Transshipment facilities were provided at Rayak, and in 1914 a junction with the Baghdad Railway was effected at Aleppo. The intended standard-gauge branch to the coast was built from Homs to Tripoli and opened in June, 1911.

After the war the D.H.P. Railway resumed possession of its line, but with the Damascus—Mezerib (3 ft. 5¼ in. gauge), and the Tripoli—Homs (standard gauge) sections taken up. The former was not worth relaying, as the Hedjaz Railway paralleled it, and the D.H.P. Railway took over as from March 1, 1924, the administration of the Syrian section of the Hedjaz system, namely, Damascus to El Hamme and Deraa to Nessib, totalling 205 km. of 3 ft. 5¼ in. gauge. Steps were taken in 1920 to restore the Tripoli—Homs line and it was reopened on October 1, 1921, giving standard-gauge rail access to the coast entirely on Syrian soil. The Baghdad Railway was seriously affected by the establish-

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ment of the Syro-Turkish frontier, for its line was divided at various points by the boundary. Eventually the French and Turkish authorities agreed that the section from Yenice to Nisibin, and its branches, should be worked by a French company, and this arrangement came into force in 1922. The company was at first known as the Chemins de fer de Cilicie-Nord Syrie, but afterwards the Société d'exploitation des Chemins de fer de Bozanti-Alep-Nissibine et Prolongements, and was commonly called the B.A.N.P. It maintained its portion of the Taurus Express route until July 1, 1933, when the present scheme became effective, whereby all the lines on Syrian soil are worked by the D.H.P. Railway. This concern took over the operation of Syrian sections of the Baghdad Railway, and the portions inside the Turkish frontier passed in part to that Government and the remainder to a newly-formed South Turkish Railway.

* * * *

American Locomotive Power, 1915-1940

IN past years American railways had the reputation of working their locomotives hard, and of replacing them after a relatively short life, but since the depression which from 1929 to 1932 had so profound an effect in reducing traffics and revenues, the position has changed considerably. From 1915 to 1919 Class I railways in the U.S.A. put 8,150 new steam locomotives into service in five years, and the eleven-year period from 1920 to 1930 saw the introduction of another 11,692, whereas from 1930 to 1940 inclusive the total number of steam locomotives built for American railways has been only 1,222. It is true that roughly 800 electric and diesel-electric locomotives have gone into service during the ten years last mentioned, but the gradual fall in average steam locomotive construction from 1,630 per annum in the 1915-1919 period to 122 per annum in the 1931-1940 period means that 69 per cent. of the steam locomotives now in use on American railways are more than 21 years old. This is despite the fact that the scrapping of obsolescent locomotive power has proceeded steadily during these years; indeed, whereas in 1930 the total number of steam locomotives in service in the U.S.A. was 55,875, by 1940 the number had fallen to 40,355, a reduction of 28 per cent.

At present the American total of freight locomotives, which was 33,203 in 1923 and 28,738 in 1930, has dropped to 22,118. In October, 1940 (the month in each year when the traffic peak is usually reached), the number awaiting repair was 5,435, and the number stored 1,493, leaving 15,190, or 68·7 per cent. of the total, in active service. This is the best figure since the years 1923 to 1929, when the percentage ranged between 72·5 and 76·5. The worst years were 1932 and 1933; in 1932, 7,891 freight engines were unserviceable and 5,801 stored out of a total of 27,310, which meant that only 50·0 per cent. of the total locomotive stock was at work, while in 1933, 8,985 were unserviceable and 3,787 stored out of a total of 26,925, 52·8 per cent. of the total stock being thus in action. By October, 1939, the reserve of stored locomotives had fallen to 832. It is realised that an imperative present need is to reduce the total of 5,435 locomotives which were unserviceable and awaiting repair in October of last year. The increased power of the modern types is shown by the fact that whereas the total number of freight locomotives fell by 33½ per cent. from 1923 to 1940, the aggregate tractive power declined by only 17½ per cent. in the same period; further, the gross ton-miles in October, which reached a peak of 110,444 millions in 1929, and had fallen to 65,812 millions four years later, had recovered to 93,209 millions by 1939, despite the reduction in locomotive stock. Locomotive-miles per active locomotive, which in the month of October fluctuated between 2,600 and 2,970 throughout the years from 1923 to 1934, mounted to 3,224 by 1940; and gross ton-miles per train-mile, which increased from 1,584 in 1923 to 1,965 in 1930, and then by reason of the slump receded to 1,785 in 1934, rose to a new high level of 2,137 in 1939 and was maintained at 2,120 in 1940.

In pursuance of the policy of increased power per unit, all the 213 steam locomotives ordered for Class I railways during 1940 (except six shunters) were of large dimensions. All but two of the 48 passenger locomotives were of the 4-8-4 wheel arrangement; the two were 4-4-4-4 locomotives for the Pennsylvania, probably a development, of slightly reduced length and weight, of the large 6-4-4-6 passenger locomotive exhibited at the New York World's Fair in 1939. Of the 213 steam locomotives ordered 73 were of articulated types; the 71 of these for freight service comprised 10 of the 2-6-6-6 type (with six-wheel bogie at the firebox end), 38 of the 4-6-6-4 type (20 in one order for the Delaware & Hudson), 8 of the 2-8-8-4 type, and 15 of the 4-8-8-4 type. Of the non-articulated locomotives for freight service, 10 were of the 4-8-4 and 60 of the 4-8-2 type. Other orders were for six 2-8-2, seven 2-8-4, and five 2-10-4 freight locomotives, and the two 0-8-0 and four 0-6-0 shunters. Diesel locomotive orders for Class I railways reached a total of 331 in 1940, but of these by far the majority (262) were for shunting service, ranging mostly from 600 to 1,000 h.p. Only eight diesels were ordered for freight service, and two for mixed traffic, the remaining 59, for railways in all parts of the U.S.A., being passenger engines. Two units (for the Union Pacific) were of 6,000 h.p., 17 of 4,000 h.p., and the remainder of 2,000 h.p. With one small diesel-mechanical exception, all the diesel locomotives have electric transmission. Steam locomotives, however, still form 96 per cent. of the total American stock.

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The Late Sir Thomas Williams

SIXTY-FIVE years ago the incursions of the old L.N.W.R. into the South Wales area provided one of the liveliest topics in railway circles, and the L.N.W.R. purchases then made are still represented by long sections of L.M.S.R. line into what is otherwise G.W.R. territory. This North-Western invasion of South Wales was responsible for bringing to Euston a personality which otherwise would have belonged in all probability either to Paddington or to one of the local Welsh railways. Sir Thomas Williams, whose death at the advanced age of 88 we regret to record this week, was born at Newport, Monmouthshire, and by the time he began his business career the L.N.W.R. was well established at various points along that side of the Bristol Channel. In 1876 he entered the service of the former L.N.W.R. and held various positions in the South and Central Wales District to such good effect that he was appointed District Goods Manager at Warrington in 1902. Five years later he came to London as Goods Superintendent at Broad Street in succession to Mr. F. H. Dent who had been appointed Goods Manager of the South Eastern & Chatham Railway. We believe we are correct in saying that Sir Francis Dent (as he afterwards became) accepted this appointment with the reversion to the general managership when the then General Manager (Mr. Vincent Hill) retired, because he saw little prospect of further advancement with the L.N.W.R. Thus, when Mr. Williams became Goods Superintendent at Broad Street, it was thought by many that he had reached the zenith of his career. But it was not to be, for only four years later he was appointed Assistant to the General Manager dealing primarily with labour questions and work in connection with the Conciliation Boards, and while holding that position he had many delicate problems to solve. In 1914 he became Chief Goods Manager, and in February, 1917, when the late Sir Guy Calthrop was appointed Coal Controller, Sir Thomas Williams became Acting General Manager of the L.N.W.R. On the death of Sir Guy Calthrop, Sir Thomas Williams was appointed General Manager in March, 1919, and in August of the same year received the honour of knighthood. About that time his son, Mr. W. Howard-Williams, became General Manager of the Central Argentine Railway, and when we published a photograph of the two (in our issue of December 17, 1920) we were able to comment that never before had father and son been contemporaneously General Managers of two such important railways as the L.N.W.R. and the Central Argentine. Sir Thomas Williams retired at the end of 1920 and was then elected to a seat on the board of directors. After grouping he continued to serve as a Director of the L.M.S.R. until February, 1939, when he was among the directors retiring by rotation and did not offer himself for re-election.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

From the U.S.A.

The Western Pacific Railroad Company,
Mills Buildings, 220, Montgomery Street,
San Francisco, California
March 23

TO THE EDITORS OF THE RAILWAY GAZETTE, LONDON

GENTLEMEN, ALL.—In behalf of my office, which is headed by the President of our company, I thank you heartily for your fine issue of January 31, 1941, in which are the pages about the construction of the Western Pacific's northern California extension to Bieber. You did a fine piece of work and we appreciate it.

God bless you, Senores—Editors of THE RAILWAY GAZETTE, London, Merrie England—ah, merry and still in the ring, and still going strong.

Buena suerte,
TOM. P. BROWN

Increases in Rail Fares

May 8

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—When rail fares were recalculated on a 1½d.-a-mile basis in 1928, the process seems to have involved first adding any fraction of a half-mile in the chargeable distance, then adding 50 per cent. to the penny-a-mile figure thus arrived at, and finally adding any fraction of ½d. on fares under 1s. or fraction of 1d. on fares over 1s. For a journey of, say, 1¼ miles, the fare thus became 2½d., and not 2d. as would have been arrived at by calculating 1¼ miles at 1½d. per mile. The same principle was adopted when the fares were increased by 5 per cent. in October, 1937, but the fact that ordinary single fares of 2½d. and 4d. (alone) were not then subjected to any increase suggests that it was appreciated that these two fares already included a margin of at least ¼d. which would more than cover a 5 per cent. increase.

The 10 per cent. increase made in May, 1940, and the 16⅔ per cent. substituted for it in December, 1940, were applied similarly inasmuch as they were added to fares that had already been increased by substantial "fractions," but on one point of detail there was a departure from earlier practice; viz., the 10 per cent. and the 16⅔ per cent. were calculated to the *nearest* penny, and resultant fractions of less than 0·5d. were dropped. The combined effect of these increases for distances including fractions of a mile can be illustrated by a few examples, as shown in the accompanying table. Distances have been taken to the nearest 0·1 mile, but in practice it might be more convenient to use the measurements in miles and chains that are already in use for other calculations of railway rates.

Distance	Up to Sept., 1937	Increased by 5% Oct., 1937, to April, 1940	Further increased by 10% from May, 1940	Increased by 16⅔% over October, 1937	
				Railway method of calculation	Arithmetical figure at (1·5 + 5% + 16⅔% pence a mile
miles	d.	d.	d.	d.	d.
1·7	3	3½	3½	4½	3·12
2·7	4½	5	6	6	4·96
3·2	5½	6	7	7	5·88
5·0	7½	8	9	9	9·19
5·1	8½	9	10	11	9·37

The "fractions of a penny" rule may have had some virtue in simplifying the issuing of tickets and the giving of change, but even this advantage disappears when the *increase* on a fare already including an odd halfpenny is made up to the next penny, thus perpetuating the odd halfpenny in the fare arrived at. The most obvious example of this type is the ordinary single fare for distances between 1¼ and 2 miles, which was increased last December from 3½d. to 4½d. although the level 4d. would show a substantial margin over the September, 1937, fare of 3d. augmented by 5 per cent. and 16⅔ per cent. The present scale includes no ordinary fare between 2½d. and 4½d., although on a calculation at 1·8375d. per mile (*i.e.*, 1½d. plus 5 per cent. plus 16⅔ per cent.) it should be possible to travel up to 1·6 (or 1⅝) miles for 3d. and 2·1 (or 2⅛) miles for 4d. The ordinary return fare for a journey of between 1¼ and 2 miles each way has now been increased from 7d. to 9d., although 7½d. would more than cover the 5 per cent. and 16⅔ per cent. increases over the original 6d. fare.

With cheap day return fares anomalies are still more numerous, especially those due to the practice of "rounding" ordinary single fares that formerly included an odd halfpenny. When the standard rate was at 1½d. a mile it was usual to charge (for example) the level 6d. return against both at 5½d. and a 6d. single, but with the 5 per cent. increase in October, 1937, the 6d. return went up to 6½d. in both instances; the day return fare corresponding to a single fare of 6d. on the new scale thus became ½d. higher than that corresponding to a single fare of 6d. on the old scale, and the "level penny" convention was deliberately abandoned. The same policy was pursued in making the subsequent increases.

For fares of 1s. or more, the original 1½d. a mile rate was calculated "plus fractions of a penny" (instead of a halfpenny), and subsequent percentage increases have been made on these fractions also. The monthly return fare so widely advertised as "a penny a mile" was only occasionally true to this description; its vagaries may be illustrated by considering a journey of 14·6 miles each way, which a passenger might reasonably have expected to cost the level 2s. 6d. for a monthly return ticket. The railway method of calculation first adds 0·4 mile to bring the chargeable distance up to 15 miles, which at 1½d. a mile would be 1s. 10½d. single, but the adding of the fractional ½d. to make this 1s. 11d. is followed by a difference of 3d. in the monthly return fare (single fare and a third, plus fractions of 3d.), which thereby becomes 2s. 9d. Successive 5 per cent. and 16⅔ per cent. increases have brought this amount up to 3s. 5d., although a calculation on the actual mileage would total slightly less than 3s.

The Chairman of the Railway Charges Consultative Committee is reported in THE RAILWAY GAZETTE of September 6, 1940, as having said that "a flat increase was not necessarily the best means of meeting additional costs," and greater equity in passenger fares might well be achieved by recalculating them on a mileage basis closer than has hitherto been adopted—*i.e.*, by fixing the rate per mile at whatever figure is necessary and calculating the fares thereon to the nearest halfpenny or penny. If it be suggested that this is too complicated compared with a method by which every fare of x pence is increased to $x + y$ pence, it may be pointed out that the increases already made contain many departures from the latter method: for example, although an ordinary single fare of 4d. in September, 1937, is now 5d., a cheap day return at the same fare has become 5½d., a child's 4d. single is 4½d., and a child's 4d. cheap return is 5d.

Under wartime conditions a particularly unfortunate aspect of the inequalities pointed out is that they are naturally more noticeable in the fares for local journeys, where every increase in rail fares tends to encourage passengers to prefer the alternative bus or tram service usually available.

Yours faithfully,
"QUINTON"

RAILWAY OR RAILROAD.—To those who regard the word "railroad" as the distinctive mark of a main line in the U.S.A., it may come as a surprise to learn that of 137 Class I railways in that country no fewer than 65 use the word railway in their corporate names, compared with 69 that use railroad; three use neither. Nevertheless the common practice in the U.S.A. is to term a main line a railroad and to reserve what to British ears is the more familiar "railway" for tramway, underground, elevated, and interurban lines. Legally, however, the two words are used interchangeably.

PUBLICATIONS RECEIVED

Drawing and Development for Practical Welding: How to Overcome the Simple Distortion Problems. By F. W. Sykes. London: Sir Isaac Pitman & Sons Ltd., Parker Street, W.C.2. 7½ in. × 5 in. 72 pp. Illustrated. Price 4s. net.—In four chapters this book deals in an elementary and practical way with the subjects indicated in its title and sub-title. Chapter I is an introduction to sketching and drawing. The importance to the plater and welder of some knowledge of freehand drawing is pointed out and well illustrated by isometric and perspective sketches. This chapter and another on development apply not only to welded work but to the wider field of plate and tubular construction. The chapter on welded joints shows the actual application, on a number of simple welding jobs, of standard weld symbols as introduced by B.S.S. No. 499—1939. The concluding pages, dealing very shortly with the basic problem of how to overcome heat distortion, should prove of particular value to designers, platers, and welders. In a future edition certain of the sketches might be improved by omitting the shading (*e.g.*, Figs. 17, 46, 65). B.S.S. 499 should not be referred to for the strength and the testing of welds (pp. 27 and 34); perhaps the author had B.S.S. No. 538 in mind.

Money in Exports. By Walter Buchler. London: Useful Publications, 524, Mansion House Chambers, E.C.4. 7½ in. × 5 in. 221 pp. Price 10s. 6d. net.—Mr. Walter Buchler has written an interesting book which has to be read in the light of the change in circumstances arising from the progress of the war. Much of the information it contains will be found of use to manufacturers, merchants, and exporters, when export trade can once again be indulged in more freely. A separate chapter is devoted to each of a wide variety of markets, and local methods and business practices are dealt with in some detail.

Westalite Rectifiers.—This supplement to Descriptive Pamphlet No. 11, issued by the Westinghouse Brake & Signal Co. Ltd., Chippenham, Wilts, introduces a new form of rectifier, of steel plate and selenium construction, as offering for a number of uses advantages over the well-known copper-oxide type that has found wide application of recent years.

THE SCRAP HEAP

Two oak chairs, which have been in use at the stationmaster's and inspector's offices at Taunton station for nearly 100 years, have been presented to the museum at Taunton Castle by the Great Western Railway Company. The chairs are a link with the old Bristol & Exeter Railway and have the initials B. & E. carved on the back.

* * *

A nonogenarian friend recently told us of his youthful experience on the old Bolton & Leigh Railway (now part of the L.M.S.R.) between Kenyon and Bolton somewhere about the year 1860. The train stuck on a gradient, and the guard walked down the side of the train shouting "Now then: all first class passengers keep their seats. All second class walk. All third class shove behind."

* * *

"RAILWAYMAN SMITH ENTERTAINS"

Great Western Railway employees "took the air" for 40 minutes on Thursday afternoon, May 15, in "Railwayman Smith Entertains," a variety programme broadcast in the B.B.C. Forces programme. All who contributed to what was the first radio feature of its kind were drawn from among G.W.R. employees and included a fireman, a ticket collector, goods porters, and members of the clerical staffs. Constructed on the lines of the B.B.C.'s popular "Music Hall" feature, the programme included items by the Paddington G.W.R. Harmonica Band—composed of goods porters—trumpet, xylophone, flexitone solos, a short sketch, songs, as well as a dramatic and particularly topical recitation. The whole programme reached a high standard of excellence which suggests that Railwayman Smith and his colleagues, had they not chosen a railway career, might have found one in the world of entertainment.

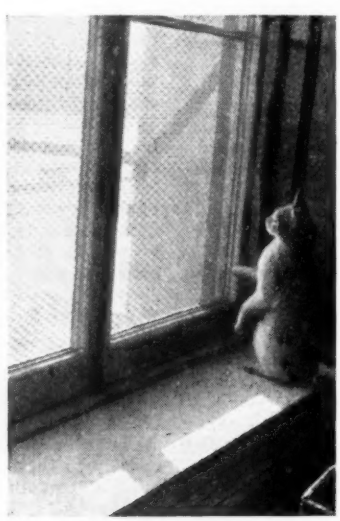
TELEPHONE AND TELEGRAPH IN U.S.A.

The railways of the United States use 1,285,898 miles of telephone and telegraph wires in their operations. This would be sufficient to reach more than 51 times around the globe at the equator. The number of poles a mile of line varies from 26 to 60 or more, depending on the number of wires to be carried, the kind of wood, the number of highway, track, bridge, or other crossings to be made, and other conditions. The standard span lengths for polelines, and the approximate number of poles a mile required for these spacings, are:—

Span lengths in ft.	Approx. No. of poles a mile
88	60
100	53
130	40
150	35
175	30
200	26

* * *

Twenty-two years ago, Mary Lee Read, a director of community sings, realised that railroad stations are natural harbours for heartaches. She had an idea—it was music the stations needed. Her first programme, given in the Denver station, was so successful that it became an annual affair, and the railroads ran excursion trips for those who wanted to hear her 500 carollers. In New York in 1928, Mrs. Read was struck with the musical possibilities of Grand Central Terminal, with its cathedral spaces and half-million travellers a day. She was commissioned to prepare a Christmas programme and has been Director of Music there ever since, arranging Easter, Thanksgiving, and Christmas programmes.



A member of the L.N.E.R. staff at H.Q.

"Can you spare a couple of gallons?"
From the "Burntisland Shipyard Journal"

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

VICTORIA

Melbourne Suburban Traffic Report

Further details of the report of the Melbourne suburban traffic special committee are now available. [In an editorial at page 59 and in an Overseas letter on page 62 in our issue of January 17 last we gave brief details of the problems to be solved—ED., *R.G.*]

The table below gives a good idea of the distribution of the peak hour traffic over the four approach tracks east and west of Flinders Street station and the suburban lines radiating thence :—

—	Total passengers leaving Melbourne daily	Busiest hour 5.15–6.15 p.m.		Busiest half-hour 5.15–5.45 p.m.	
		No.	Percentage of day's total	No.	Percentage of day's total
West of terminal—					
St. Kilda line	16,474	6,103	37·0	3,413	20·7
Port Melbourne line	5,367	1,036	19·3	634	11·8
Essendon line	16,551	6,243	37·7	3,607	21·8
Williamstown group	33,992	9,737	28·7	6,237	18·3
Total, tracks west of terminal	72,384	23,119	32·0	13,891	19·2
East of terminal—					
Sandringham line	23,704	10,704	45·2	6,020	25·4
Caulfield group	32,171	14,137	43·9	9,441	29·4
Camberwell group	31,835	13,923	43·7	8,702	27·3
Heidelberg group	27,277	10,793	39·5	6,328	23·2
Total, tracks east of terminal	114,987	49,557	43·1	30,491	26·5
Grand total, all tracks east and west ...	187,371	72,676	38·8	44,382	23·7

It is obvious, therefore, that considerably the greatest traffic density is over the Camberwell and Caulfield lines during the rush hour and half-hour, though not throughout the whole day, and that the four eastward tracks carry by far the heavier traffic.

An important point made in the report is that, with the exception of the Camberwell and Caulfield tracks—on which trains are operated during the height of the peak at the minimum headway of 2 minutes—all the tracks from the central station could carry twice the present number of peak passengers if additional carriage stock and, in certain instances, longer platforms, were provided.

Longer Suburban Leads

The main theme is, however, based on the fact that, with the outward spread of the residential areas, traffic has diminished on the inner suburban lines since 1927 by nearly 4,000,000, whereas to and from the outer suburban stations it has increased by 4,500,000 passenger journeys.

The real solution cannot be found in any minor expedients. Inevitable expansion in the areas served by the Camberwell and Caulfield groups of lines will demand additional tracks and extensive alterations at Flinders Street, which are also vital requirements for the extension of express running to provide proper services for residents in the outer suburban areas.

SOUTH AFRICA

The Railway Budget

In presenting the Railways & Harbours budget for 1941-42, the Minister, Mr. F. C. Sturrock, said that he anticipated a surplus for 1940-41 of £2,404,538. The revised revenue figures for the year showed a total of £43,089,000 this being £3,583,162 more than the original estimate. Additional expenditure had been very low in ratio to the increased revenue, the total increased expenditure for all services being £1,260,537. It was proposed to dispose of the surplus by a contribution of £1,000,000 to the Rates Equalisation Fund; £650,574 to writing out of capital account, discount and expenses on pre-Union capital; £500,000 to Renewals Fund and £250,000 to a consolidated reserve fund for a proposed staff benefit society. The balance of £3,964 would be carried forward.

The estimated revenue for 1941-42 was: railways £38,277,000, harbours £2,172,000, steamships £835,000, and airways £33,000, a total of £41,317,000. The estimated expenditure for 1941-42 was: railways £36,837,437, harbours £1,871,304, steamships £730,908, and airways £137,919, a total of £39,377,568. The estimated gross surplus for the year was £1,739,432. Of this amount £1,000,000 would be appropriated to Betterment Fund, £487,000 to Pension and Superannuation Funds,and £230,000 to writing out of capital account, discount and expenses on pre-Union capital which, with the £650,574 from the 1940-41 surplus, would liquidate the whole amount. The balance of £22,432 would be carried forward.

Staff Benefit Society

Referring to the contribution of £250,000 to a consolidated reserve fund for a proposed staff benefit society, the Minister said that the mutual aid and benefit societies had grown in number and extended the scope of their benefits, yet these societies, with perhaps two exceptions, would be unable to meet their obligations for long but for the constant flow of new and young members. The amount of £250,000 would enable the administration to give material assistance, as well as free advice, and to provide an inducement to the staff to form a sound society to replace the many unsound ones at present existing.

Tourists from the Congo

The first step to facilitate the entry into the Union of Belgian tourists has been taken as a result of the visit to Cape Town of M. Albert de Vleeschauwer, Belgian Minister for the Colonies. A scheme has been initiated to overcome language difficulties and to arrange accommodation. This task has been entrusted to Mr. P. G. Reyneke, Manager of the Publicity and Travel Department. A tourist liaison officer who speaks French and Flemish will meet all Belgian tourists at Mafeking, where arrangements will be made to free their holiday from as many inconveniences as possible. This officer will also go to Port Elizabeth, East London, and Durban to gather relevant information about facilities in those towns. It is stated that the number of tourists for whom provision will have to be made will be about 25,000 and it is estimated that the S.A.R. will benefit to the extent of about £500,000 as a result of this traffic.

UNITED STATES

Capital Expenditure in 1940

Capital expenditure on equipment and other improvements to railway property made by Class I railways in 1940 aggregated $429,147,000, the highest figure since 1937, according to the Association of American Railroads. This figure represents an increase of $167,118,000 over 1939; gross capital expenditure in 1937 amounted to $509,793,000.

Of the total for 1940, $271,906,000 were spent on locomotives, freight, and passenger vehicles and other equipment, and $157,241,000 on permanent way structures. These figures represent increases of $138,518,000 and $28,600,000 respectively over those of the preceding year.

IRAN

Teheran—Tabriz Railway Progress

The construction of the north-western railway to connect Teheran and Tabriz is proceeding rapidly. In the mountainous region between Mianeh and Tabriz two tunnels each about 650 yd. in length have already been completed, and work on several others—including one 1 mile 100 yd. long—is proceeding satisfactorily.

[It will be remembered that in referring to this railway briefly on page 484 in our issue of April 25 last, we mentioned that the first 196 miles of line from the Teheran end had been completed to a place called Zinjan, or roughly half the whole line, which is, apparently, 350—400 miles in length.—ED., *R.G.*]

NEW STANDARD SWISS SIGNALLING ASPECTS

New type of large radius turnouts for high-speed junctions necessitates the introduction of additional signal aspects

IN THE RAILWAY GAZETTE for March 8, 1935, pages 423 and 431, particulars were given of the 3-aspect system of indications adopted for distant signals in Switzerland, in order to advise the driver whether the home signal he was approaching had been cleared for a direct (high speed) or diverging (reduced speed) route. This was a safeguard not until then provided in the Swiss signalling code, and coincided with the adoption of colour-light signals, some of which were illustrated in our issue of October 30, 1936. On October 6, 1940, a new official signalling code came into force and the following brief particulars of its leading features may be of interest.

During the last few years the Swiss Federal Railways have been installing a new design of points and turnouts, over which trains can run on the diverging route at speeds up to at least 80 km.p.h. (50 m.p.h.)—probably in the near future as much as 100 km.p.h. (62 m.p.h.) will be allowed, especially at important running junctions and at the changeover points between double and single lines. This has necessitated a revision of the signal aspects in order to take full advantage of the new facilities, and avoid risk of danger where both types of points are in use and where there is consequently a considerable difference between the permissible speeds on the various diverging routes.

The semaphore signals on the Swiss lines are of the Central European type, showing a single horizontal arm and a red light for stop and one arm inclined upwards and a green light for unrestricted running. For running over a diverging route two arms are shown inclined, and—until the recent change—two green lights. Although not included in the official regulations—and having, therefore, in each instance to be covered by special instructions—signals with a third arm, working on the same principles, were installed at some stations to provide a distinction between diverging routes. This was not considered a safe arrangement where the old and new types of points were involved, being likely to confuse the drivers.

The New Code of Aspects

Where semaphores still exist the lower arms of the 2-arm signals have been altered to display a yellow instead of a green light. (The second arms of the 3-arm signals have similarly been altered as a temporary measure; such signals will gradually be abolished.) Semaphore signals can be retained only where the old form of points alone are involved. All signals reading over the new type of points have to be colour-lights. The new aspects are:—

Home Signals

Stop	1 red light (1 arm horizontal)*
Proceed (Direct route)	1 green light (1 arm, inclined upwards)*
Proceed (Diverging route; old type points)	Green light over yellow light (2 arms inclined upwards)*
Proceed (Diverging route; new type points)	Green light over green light (colour-light signals only)

* Where semaphores remain

Distant Signals

(All distant signals showing more than two aspects are colour-lights)

Caution (Home signal at danger)	Two yellow lights, horizontally
Proceed (Direct route signalled)	Two green lights, diagonally
Warning (Diverging route, over old type points)	Yellow light and green light diagonally
Attention (Diverging route, over new type points)	Two green lights, diagonally, with yellow light over left-hand light

(Where the old 2-aspect distant disc signals remain, the green lights of the proceed indication are placed horizontally.)

It will thus be seen that this arrangement provides for both home and distant signals to be 4-aspect, if necessary, and that for every home signal aspect there is a corresponding one at the distant signal. At certain stations where points follow one another and, with the support of electric route locking, one home signal is sufficient to govern movements over them, the existence of old and new type points may render combined aspects essential. In that case if the diverging route is set at the first location the appropriate aspect (green over yellow, or green over green) alone appears. If, however, the direct route is set and the train is to diverge at the next location, then an additional single green light is shown above, so that the two aspects are read downwards in series. Thus if the direct route is set at the first location and a diverging route over new type points at the next, the home signal displays three green lights vertically. (The distant signal then shows the "proceed" aspect only if the direct route is set at *both* locations.)

Where the starting signals are themselves equipped to give several aspects, as where lines diverge ahead of the station, and have, as is frequently the case, their own distant signal on the home signal post, there may be as many as eight lenses at one signal location and as many as five lights can appear at once. Home signals in Switzerland are as a rule placed at some distance in the rear of the first fouling point, almost where an outer home would be placed in Britain.

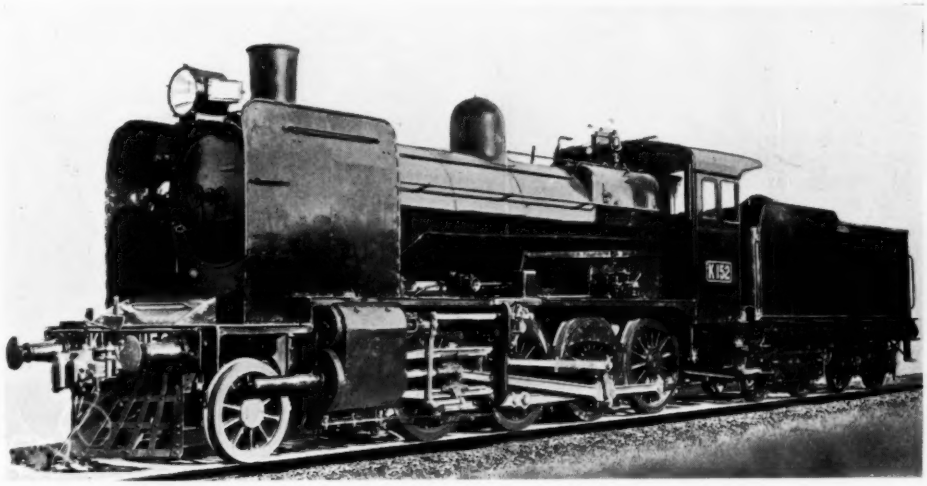
The new aspects are illustrated by a coloured diagram and typical station layouts, accompanied by an explanatory article, in the official *Bulletin of the Swiss Federal Railways* for September, 1940.

Corrosion Tests in a Tunnel

In a paper published in the *Journal of the Institution of Civil Engineers* for March, Mr. S. C. Britton, the author, records tests made with various materials by the L.M.S.R. to ascertain their resistance to corrosion in a confined damp space subjected to the fumes of locomotive exhaust. The L.M.S.R. had been considering a new building which involved the provision of equipment for the removal of exhaust gases from steam locomotives, and had in mind the unfortunate experiences at the Union station, Chicago, recorded in THE RAILWAY GAZETTE of January 20, 1939 (p. 98), where hanger rods of 14 per cent. chromium steel ¾-in. thick in the ventilating plant were completely severed by corrosion within three years. In the L.M.S.R. tests non-ferrous metals and alloys, mild steel protected by paints, by metal coats, or by thick wrappings, cast iron, stainless steels, and a few non-ferrous metallic materials, were exposed in the ventilating shaft of a tunnel for periods ranging up to 3¼ years. A fairly intensive service of steam trains works through this tunnel, which is on a gradient, and the blast from locomotives is, therefore, hard. A moulded Bakelite-fabric pulley was the only specimen to remain substantially unchanged, while copper, although superficially corroded, became covered with a protective coating of corrosion-product, and proved to be the best metallic material. Copper alloys with better mechanical qualities than copper also did well. Of two specimens of aluminium-bronze, one with a well-marked two-phase microstructure was seriously embrittled, and the other with only isolated fragments of a second phase behaved like the other copper alloys. Aluminium and stainless steel suffered severe local attack, and, in 14-S.W.G. sheets, were perforated within three years. Mild steel in 14-S.W.G. sheets was entirely destroyed within three years, but almost complete protection was afforded to it by a thick rubber coating. Other thick coatings, such as bitumen, reinforced by asbestos, and cotton lint impregnated with petroleum jelly, also gave fair protection. Sprayed metal coatings failed quickly, and well-chosen paint coatings did not prevent rust after, at most, a year. Plain cast iron and a special cast iron were attacked, but a highly-alloyed austenitic cast iron suffered only localised graphitisation. Concrete, whether of aluminous or Snowcrete cement, suffered only superficial softening, and the reinforcement, 1½ in. below the surface, was unaffected after three years.

NEW LIGHT 2-8-0 LOCOMOTIVES, VICTORIAN RAILWAYS

A new series of these useful 13½-ton-axle-load engines, though differing only in detail from the original series, is proving even more successful



One of the latest series of "K" class, improved, 4-8-0 type locomotives, Victorian Government Railways

FIRST introduced in 1922-23 for mixed and freight traffic on secondary lines laid with light rails, a series of ten 2-8-0 tender engines, designated as class "K," were constructed at the Newport workshops of the Victorian Government Railways, to the design of Mr. A. E. Smith, then Chief Mechanical Engineer. These locomotives soon established their superiority in every respect over the smaller 4-6-0 type tender engines of class "Dd", previously the largest and most powerful locomotive allowed to work over these lines.

In 1925 the increasing demand for more powerful locomotives for light-line service resulted in the redesigning of the successful class "K" as a 2-8-2 type (designated class "N") specifically intended for easy and rapid conversion to 4 ft. 8½ in. gauge, but in all other respects embodying the features of the original design. Mr. A. E. Smith also designed the "N" class, of which 30 were built at Newport from 1925-31. Cylinders, wheels, motion, and other details were interchangeable with the "K" class, but the boiler was redesigned with a wide firebox to take advantage of the alteration in the wheel arrangement. The nominal tractive effort of both classes was identical. The "N" class engines did not prove quite so satisfactory in operation, however, mainly owing to their increased wheelbase preventing their turning on the older and shorter types of turntable without recourse to "breaking" engine and tender.

With returning prosperity, constantly increasing traffic, and the urgent necessity of replacing a large proportion of the light-line locomotives which are past economic age, the provision of additional modern light-line engines was reviewed in the light of present-day conditions, when the Commissioners formulated a three-year rolling stock rehabilitation programme for the years 1939-40, 1940-1 and 1941-2, calling for the construction of a minimum of 20 new locomotives a year. Owing to the unlikelihood of gauge standardisation being attempted on a large scale—at any rate during the war—and the greater utility of the "K" class for light-line service, it was decided to revert to the 2-8-0 wheel arrangement, and the programme provided for a total of 40 additional locomotives of this type being turned out in the three-year period; 20 in 1939-40, 10 in 1940-1 and 10 in 1941-2.

Accordingly, the first year's allocation of 20 class "K" locomotives was authorised and finance provided. With the outbreak of war, however, this allocation was cut to 15 engines but subsequently increased to 16 as a result of economies, which, as explained below, have been effected in construction. The first of the new batch was installed in service in May, 1940, and others have been delivered at the rate of one or two a month from Newport shops.

Special Features

The new series is identical with the original "K's," except in minor details and in having modified and improved equipment. The accompanying list of dimensions provides the best description of the new engines, but it may be added that the cylinders and steam chests and the smokebox saddle are in the form of three separate castings bolted to the frames, and hand screw reversing is provided. The leading truck wheels are fitted with flange lubricators. In the original design the firebox was of copper, but steel has been used in the new engines. The drop-type grate is of standard design with provision for hand shaking. There is a Nathan butterfly pneumatically-worked fire-door, controlled by a treadle recessed into the cab floor.

Boiler and Front End

The boiler barrel plates are ½ in. and the firebox wrapper sheets ⅜ in. thick. The length of the barrel over tube plates is 14 ft. 3 in., and the mean diameter is 4 ft. 8 in. A standard balanced regulator is located in the dome and internal streamlining of the steam and exhaust ports together with as direct large-diameter pipes as possible combine to give a very satisfactory front end. A modified self-cleaning smokebox, incorporating an annular-ported blast pipe orifice and a spark arrester, is provided. Gresham & Craven lifting type injectors are fitted. The superheater is of the M.L.S. 21-element marine pattern.

Though M.C.B. automatic couplers are fitted, transition screw couplings are also included, as the conversion of the rolling stock to automatic couplers is not yet complete. Valves and cylinders are lubricated by a Wakefield mechanical lubricator driven off the motion. A

Westinghouse Schedule A—6E.T. brake system is installed, and has a single 8-in. cross-compound compressor fitted on the right-hand side of the smokebox.

Electric Lighting and Cab Fittings

Electric lighting is provided for all cab gauges and equipment, also electric head and tail lights and combined electric and oil train code lights on engine and tender. Most of the lighting equipment was supplied by the Pyle National Company, but the turbo-generator was ordered from J. Stone & Co. Ltd.

Cab equipment includes padded seats for the enginemen, a vacuum drifting gauge of the type standardised in New South Wales, two Klinger standard reflex gauge glasses, and a standard chime whistle. Standard pneumatic sanding gear, with twin sand-boxes between the main frames, delivers sand in front of the leading coupled wheels only. A Flaman speed recorder is driven from an arm bolted to the end of the trailing left-hand coupling rod. The hopper ashpan has pneumatically-worked doors and a flushing system worked off the right-hand injector overflow.

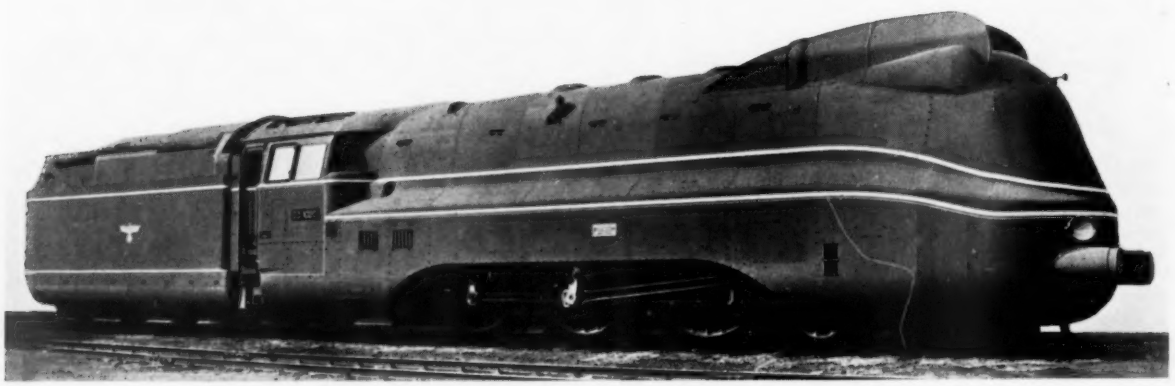
The Tender

The tender tank and bunker are fabricated by welding, and all steps and handrails are welded on. The tank and self-trimming bunker superstructure is of unit construction, bolted to the underframe, which like the bogies has been salvaged from scrap. The saving in cost effected in this and other ways has been sufficient to enable the 16th locomotive to be built over and above the 15 provided in the programme.

The engines already delivered have undergone satisfactory dynamometer car trials, and in service are proving even more satisfactory than the earlier locomotives of the class. Their leading dimensions are as follow:—

Cylinders, dia.	20 in.
,, stroke	26 in.
Piston valves	10 in.
,, max. travel	4⅝ in.
Coupled wheels, dia.	4 ft. 6 in.
Leading truck wheels, dia.	3 ft. 1 in.
Tender truck wheels, dia.	3 ft. 2 in.
Evaporative heating surfaces—	
Tubes and flues	1,322 sq. ft.
Firebox	125 sq. ft.
Total	1,447 sq. ft.
Superheating surface	281 sq. ft.
Firegrate area	25·75 sq. ft.
Boiler pressure per sq. in.	175 lb.
Tractive effort (at 85 per cent. boiler pressure)	28,700 lb.
Factor of adhesion	4·43
Wheelbase, rigid	15 ft. 6 in.
Total, engine	24 ft.
,, engine and tender	50 ft. 2½ in.
Length over couplers	60 ft. 3 in.
Maximum axle load	13 tons 10 cwt.
Adhesion weight (working order)	53 tons 2 cwt.
Weight of engine (working order)	62 tons 7 cwt.
,, tender (working order)	42 tons 5 cwt.
Total weight engine and tender	104 tons 12 cwt.
Coal capacity	5 tons
Water capacity	4,200 gal.

The 15,000th Borsig Locomotive



Streamlined Class "03" 4–6–2 locomotive, German State Railway

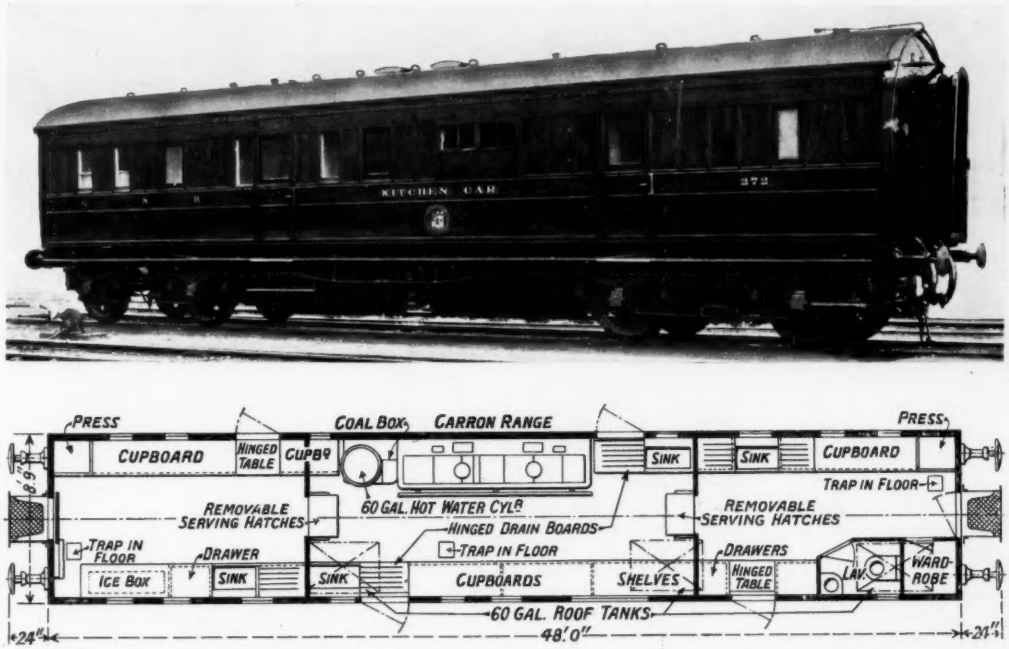
THE completion on March 27 of the 15,000th locomotive to be built at the Borsig Locomotive Works, Berlin, was marked by a formal ceremony in which the staff and workmen took part. The new engine is of the standard light Pacific type, Class "03," the first of which was placed in service about ten years ago, and of which there are now hundreds at work all over Germany. It was with these engines that exhaustive comparative tests with streamlined and ordinary examples were made, giving the result, recorded in THE RAILWAY GAZETTE of December 2, 1938 (p. 945), of an average fuel economy of about 15 per cent. in favour of streamlining for this particular class, used, as it is, chiefly for long-distance express work at speeds up to 80 m.p.h., but to an appreciable extent also in slower and shorter distance traffic. The 15,000th Borsig locomotive, it will be seen from the illustration above, which has reached us through a neutral channel, is streamlined despite war conditions.

There are two principal classes of standard Pacific locomotives on the Reichsbahn, the light "03" and the heavy "01." the first of the latter dating from 1925. Both are two cylinder simples with 6 ft. 7 in. driving wheels and a boiler pressure of 227 lb. per sq. in. The cylinders of both have a 26-in. stroke, but those of the "03" are 22½ in. dia. as compared with the 23½ in. of the heavier "01" engine. The latter has the larger boiler with an evaporative heating surface of 2,561 sq. ft., a superheating surface of 1,076 sq. ft., and a grate area of 48 sq. ft. The corresponding figures for the "03" are 2,174, 753, 44 sq. ft. The respective engine and adhesive weights in working order (non-streamlined) are: "01," 108 and 58 tons; "03," 98 and 54 tons. The springing being equalised, the maximum axle load of the lighter locomotive is only 17 tons.

Variants of the German standard Pacifics have been built for special and experimental purposes, the latter including the "02" and "04" classes of 4-cylinder compounds, one having a boiler pressure of 355 lb. per sq. in. The "05" is 3-cylinder streamlined 4-6-4 with 284 lb. pressure, built specially for the Berlin—Hamburg high-speed service, which involved the haulage of 600-ton trains at an average of 74 m.p.h. start to stop.

KITCHEN CARS FOR SPECIAL TRAINS, G.N.R. (I)

Improved dining facilities on excursion and special trains have been afforded by the provision of kitchen cars



Kitchen car built from former guard's and luggage van G.N.R. (I)

IN order to improve catering facilities on certain excursion and special trains where dining cars had previously been used, the Great Northern Railway (Ireland) put into service in 1940 two kitchen cars. One of these cars is marshalled in the centre of the train, thus providing a service from each end of the car to the passenger coaches, all seats of which are fitted with tables. Each kitchen car can deal with 200 diners.

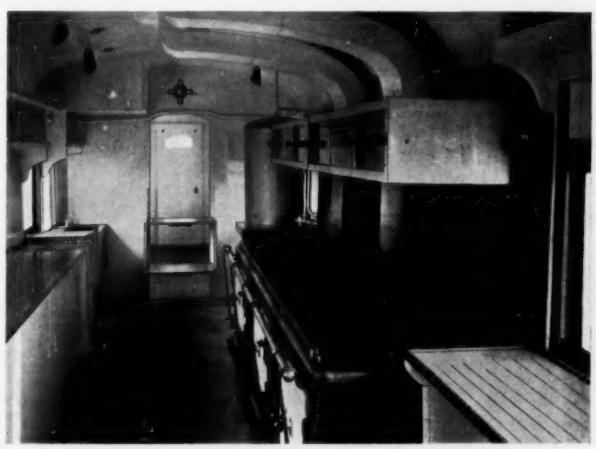
The cars were originally guards' and luggage vans, and on conversion, in addition to the installation of the necessary equipment and gangways, were modernised to conform with the latest type coaches by the fitting of a higher roof. They are divided into three compartments, a kitchen approximately 21 ft. long occupying the centre portion, and service compartments approximately 13 ft. 6 in. long at each end.

A large size coal range manufactured by the Carron Co. Ltd. is installed on one side of the kitchen with, above it, a plate rack with glass sliding doors. A 60-gal. copper water cylinder maintains a supply of hot water for the sinks, of which there are four, one at each end of the compartment and two in the kitchen. The water reservoir consists of three 60-gal. copper roof tanks with convenient filling pipes and connections on each side of one end of the car.

One of the service compartments is provided with a wardrobe and a lavatory for the staff, and in the other service compartment there is a large ice-box. Various cupboards and presses are provided in the car, and the tops of the cupboards and the ice-box are covered with polished stainless steel sheets. In the doorways between the kitchen and service compartments are removable serving shelves. Duplicate presses for spirits and tobacco, which can be sealed by the Customs officers, are provided for cross-border requirements.

Vent-Axia fans, one on each partition above the central doorway, ensure ample ventilation. The floor of the kitchen is of special fireproof material, and those of the service compartments are covered with Battleship lino. Standard electric lighting, vacuum brake, fire extinguishers, etc., are provided. The cars are 52 ft. long over buffers, and have a maximum width of 9 ft. The height above rail level to the top of the roof ventilators is 13 ft.

The improved dining facilities for a large number of passengers, which the use of these kitchen cars has made possible, has fully justified their provision.

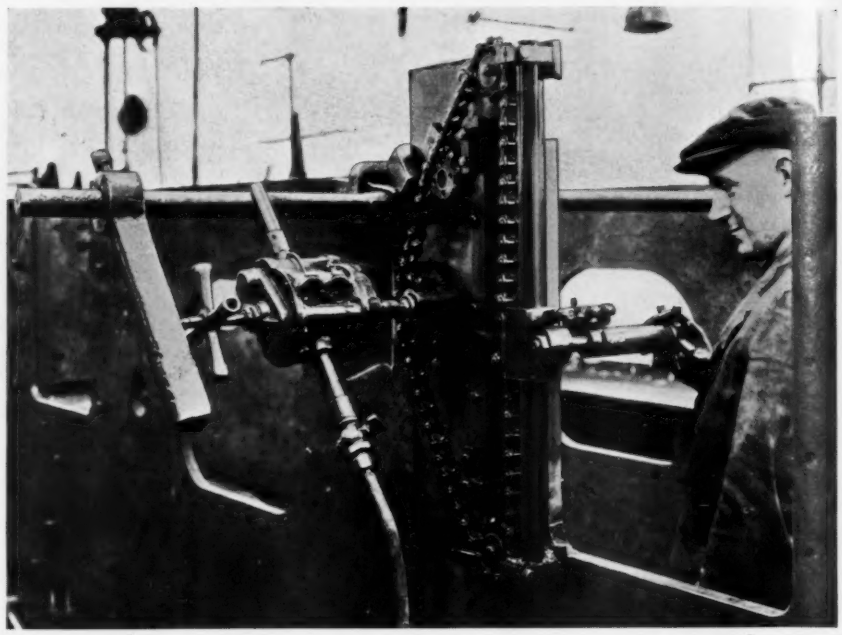


Interior view of kitchen car showing coal range, hot water boiler, cupboards, sink, and service compartment beyond

AN IMPROVISED SHAPING MACHINE

Ingenious portable device used in the Doncaster works of the L.N.E.R.

THE accompanying illustration shows an improvised shaping machine for finishing the edges of the horn gaps in locomotive frames. It was made at the Doncaster locomotive works of the London & North Eastern Railway and is proving exceedingly useful there. It consists of a vertical plate which may be clamped to the frame, and the travelling shaping tool is carried in a tool box guided by a substantial circular pillar and actuated by chain drive from the motor of a pneumatic drill. The cross feed is hand-operated. When the pneumatic motor is put into operation, the tool box is pulled by the chain in an upward direction to perform a cutting stroke. Upon reaching the top of the stroke, a tongue attached to the tool box and engaging in the chain is tripped and the tool box falls to the bottom of its stroke by gravity. The tongue is then tripped into re-engagement with the chain, and the sequence of operations continues automatically until the whole of the surface has been shaped.



Improvised portable shaping machine at Doncaster works, L.N.E.R.

This device is particularly valuable in the case of frames which have been gas cut, and affords a ready method of machining the horn gaps with a high degree of accuracy. Owing to the fact that the tool box is allowed to fall from the top to the bottom of its stroke, the machine is referred to in the shops as the "pile driver."

RAILWAY RESEARCH LABORATORIES IN NEW SOUTH WALES

Three large laboratories with highly-trained personnel and valuable scientific equipment insure efficient and economical railway operation

THERE are three large laboratories on the New South Wales Government Railways, an electrical testing laboratory under the Chief Electrical Engineer, and chemical and physical laboratories under the Chief Mechanical Engineer. As well as working for the railways, these laboratories carry out scientific research and testing for other Government departments, and also for private engineering concerns requiring their special services.

In the electrical laboratory there is now a staff of 21 technicians, who carry out all kinds of electrical investigation and, in addition, some metallurgical and physical tests. Their duties include inspection and testing—not only in the laboratory, but also in manufacturers' works—of electrical materials, apparatus, and plant. They are also responsible for investigating failures in electrical materials and equipment in service, and for the calibration of all instruments; as the department sells over £1,000,000 worth of electricity in bulk to outside consumers every year, the latter work is specially important.

The railway chemist with a technical staff of 14 under him reports on some 14,000 samples and investigations annually. Locomotive water testing and treatment in accordance with the instructions of the chemist is one of the most valuable activities of this laboratory. As well as all the usual materials used by the Mechanical Branch, this laboratory examines the steel for rails and bridges. It also analyses dangerous goods, inflammable liquids and poisonous substances carried by rail, with a view to the framing of conditions of conveyance so as to prevent contamination of other goods and insure safety in transit.

Recent investigations by the chemist have led to such improvements as (*a*) the substitution of oil emulsion cleaners, devised by the laboratory staff, for soap and water in the cleaning of carriages and painted locomotives; (*b*) the introduction of a new and efficient waterproofing mixture for the treatment of tarpaulins; and (*c*) a special obliterating ink for use on parcels stamps.

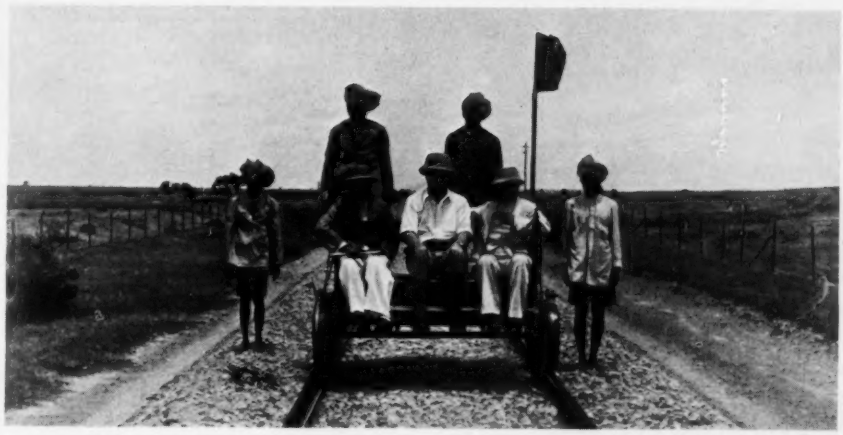
The physical laboratory is recognised as the principal authority in the State in its particular sphere of research. As well as the usual tests for strength and hardness of materials and parts, the activities of this laboratory include investigation into failures of equipment of all kinds. For instance, a complete record is kept of the 100,000 axles in service, and they are periodically tested for incipient cracks. Complaints of rough riding of vehicles are investigated and—often after a long series of tests—the source of the trouble is located and the matter rectified. Better ventilation in carriages and subways, the suitability of locally manufactured articles and tools are also subjects of investigation, the latter greatly assisting local industries.

Precision measurements of workshop gauges accurate to $\frac{1}{10,000}$ in. are checked with laboratory instruments correct to $\frac{1}{1,000,000}$ in., a branch of work specially important now that aircraft production is in hand by the department.

Typical Scenes on the Permanent Way in India

Photographed by Mr. R. Carpmael, M.Inst.C.E.

Sections of track opened up for inspection; flat footed rail on wooden sleepers. Note the typical flat country on each side the railway



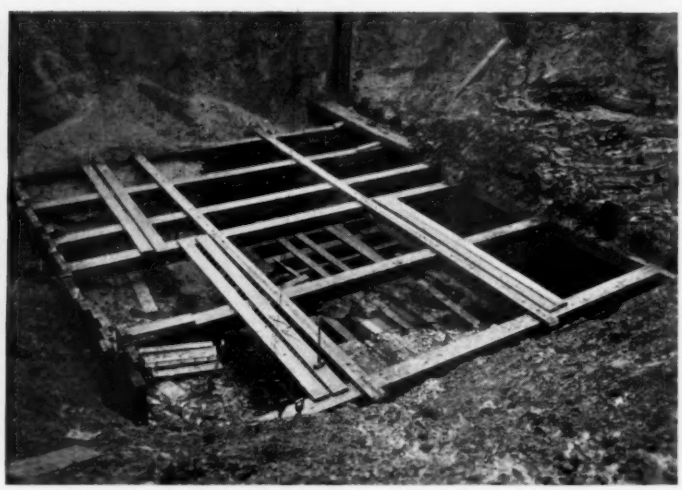
Inspection by "push" trolley. Two men run one along each rail pushing a T-shaped handle over each rail. When some speed has been attained, they jump on to the trolley each sitting on his handle, and the trolley runs a considerable distance before having again to be pushed. The other pair of men take their turn after a time. The body of the trolley can be lifted off the wheels by the four men, and the wheels are lifted separately when a train is seen to be approaching

Cast-iron pot sleepered road opened out for inspection on M. & S.M.R. main line between Arkonam and Madras. Colonel (now Sir Alan) Mount is seen making the inspection

British Railways and the War—70

Left: District Line train passing bomb hole made in tunnel near Blackfriars. Right: Roadway after completion of repairs upon District Line at Blackfriars

Photos] *[Keystone*



Left: Damaged tunnels being repaired by box construction on the cut-and-cover principle. Right: Shuttering in bomb crater over damaged tunnel (see page 581)

Photos] *[Southern Railway*

RAILWAY NEWS SECTION

PERSONAL

Institute of Transport

The council of the Institute of Transport has elected as President for the year beginning on October 1, 1941, Mr. J. S. Nicholl, C.B.E., Chief Executive Officer and Director, McNamara & Co. Ltd. Mr. Nicholl has served as a member of the council, 1934-37, and as a Vice-President, 1937-40. He has been a member of the executive committee since 1939. Mr. Nicholl is the author of a number of contributions to the *Proceedings* of the Institute and was awarded the Road Transport Gold Medal in 1935.

The council has also elected the following officers for the year 1941-42 :—

Vice Presidents: Sir Charles Bressey, C.B., C.B.E., Messrs. H. M. Cleminson, Ashton Davies, C.V.O., O.B.E., G. Mills, E. J. Missenden, O.B.E., R. Stuart Pilcher.

Honorary Treasurer: Sir Henry P. Maybury, G.B.E., K.C.M.G., C.B.

Honorary Librarian: Mr. R. Bell, C.B.E.

Honorary Solicitors: Messrs. Joynson-Hicks & Co.

We learn with regret that Mr. E. Lee, Traffic Manager of the Port of Bristol Authority and Honorary Secretary of the Bristol & District Section of the Institute of Transport since 1927, died suddenly on May 5.

Southern Railway Appointments

The following appointments have been made with effect from May 1 :—

Mr. H. G. Snell, Chief Clerk, Office of Superintendent of Operation, Deepdene Hotel, to be Assistant to Superintendent of Operation, Deepdene Hotel.

Mr. C. N. Anderson, Second Assistant Southern Divisional Superintendent, to be Senior Assistant Southern Divisional Superintendent, Southampton Central.

Mr. H. C. Walter, Assistant to Western Divisional Superintendent, Exeter Central, to be Second Assistant Southern Divisional Superintendent, Southampton Central.

Mr. A. C. Stone, Chief Clerk (Acting Assistant), Western Divisional Superintendent's Office, Exeter Central, to be Assistant to Western Divisional Superintendent, Exeter Central.

Mr. T. W. D. Abell, Acting Assistant to Western Divisional Superintendent, Plymouth, to be Assistant to Western Divisional Superintendent, Plymouth.

We regret to record the death on May 19 at his home, Oakdene, St. Margarets-on-Thames, of Sir Thomas Williams, for many years a Director of the London Midland & Scottish Railway Company and one time General Manager of the London & North Western Railway. He was born at Newport, Monmouthshire, in 1853, and was thus in his 89th year. He entered the service of the former London & North Western Railway in 1876. After holding positions in the South and Central Wales Districts, he was appointed District Goods Manager at Warrington in 1902, and in 1907 was transferred to London as Goods Superintendent at Broad Street. He served for four years in this capacity and in 1911 was appointed an Assistant to the General Manager with headquarters at Euston, where his work was concerned mainly with labour questions and affairs relating to the working of the Conciliation Boards. He became Chief Goods Manager on January 1, 1914, and was Chairman of the Goods Managers' Executive Committee, and a member of the Executive Committee for the Government Control of Canals during the war of 1914-19. In February, 1917, when the late Sir Guy Calthrop was appointed Coal Controller, he became Acting General Manager, and on the death of the former he was appointed General Manager in March, 1919. He was also appointed Lt.-Colonel, Engineer & Railway Staff Corps, R.E. In August, 1919, he received the honour of knighthood. During the war he became a member of the Railway Executive Committee, the Canal Control Commission, and the Port & Transit Committee, and continued as a member of the Railway Advisory Committee of the Ministry of Transport. He was chosen by the Railway Executive Committee to give evidence in 1918 before the Select Committee on Transport. Sir Thomas retired from the general managership of the London & North Western Railway at the end of 1920, and was then elected to a seat on the board of directors of the L.N.W.R. He was also a Director of the West London Extension Railway, the Dundalk, Newry & Greenore Railway, and Baldwins Limited; and Chairman of the Birmingham Canals Navigation. Since grouping he occupied a seat on the board of the L.M.S.R. until February, 1939, when he was among the directors retiring by rotation and did not offer himself for re-election. Sir Thomas Williams had one son—Mr. W. Howard-Williams—Chairman of the Central Argentine Railway, who for many years was associated with the old London & North Western Railway. He also had one grandson qualified in the Law and now on the staff of Solicitors at Euston.

The late Sir Thomas Williams

General Manager, L.N.W.R., 1919–20,
Director, L.N.W.R., and L.M.S.R., 1921–39

We regret to record the death of Mr. James Mackenzie, who in 1922 retired from the position of Bridge Engineer, South African Railways.

We learn with regret that Monsieur P. de Malglaive, of the Cie. Générale Transatlantique, has just had news *via* Switzerland that his younger son, Guy, who was aged 28 and was a sergeant in the French Army (Heavy Tank Corps), was killed in action on June 18 either in France or Belgium. He had previously been reported missing. The elder son, Roland, is a prisoner of war in an Oflag camp in Germany.

The death is announced from Vichy of General Pedro Jévenois, Military Governor of Cadiz, at the age of 63. General Jévenois was the author of a project for a tunnel under the Straits of

Gibraltar which was fully described in *The Railway Engineer* of February, 1932 (pp. 72-76).

The King has awarded, under date May 9, 1941, the Imperial Service Medal to 41 employees of the New South Wales Railway Department, and to six employees of the New South Wales Road Transport & Tramways Department.

INDIAN RAILWAY STAFF CHANGES

Rai Bahadur A. K. Gupta has been appointed to officiate as Deputy Traffic Manager, E.B.R., as from January 6.

Mr. L. H. Swain has been confirmed as Director, Railway Board.

Mr. F. G. Griffith, O.B.E., has been confirmed as Divisional Superintendent, N.W.R.

Mr. D. H. Hewitt has been confirmed as Deputy Chief Mechanical Engineer (Carriage & Wagon), G.I.P.R.

Mr. B. L. Cameron has been appointed to officiate as Divisional Superintendent, N.W.R., Quetta.

Mr. A. K. Muirhead, Controller of Stores, N.W.R., has been granted leave preparatory to retirement.

Mr. W. M. McGregor, Controller of Stores, E.B.R., has been appointed to officiate in the same capacity on the N.W.R., in place of Mr. Muirhead.

In place of Mr. G. de P. Leeper, Publicity & Advertising Superintendent, B.B. & C.I.R., who has proceeded on military service as from February 15, Mr. R. A. B. Graveston has been appointed to act as P. & A.S.

Mr. Reginald J. Hodges, Deputy General Manager, Mersey Docks & Harbour Board, has been appointed General Manager in succession to Sir Lionel A. P. Warner, C.B.E., who is retiring at the beginning of July.

Alderman A. H. Gledhill has been elected Chairman of the Halifax (Corporation, L.M.S.R., and L.N.E.R.) Joint Omnibus Committee for the third year in succession.

Mr. J. C. Smith, Operating Superintendent, Ceylon Government Railway, has requested permission to retire from that service after 28 years in it. Mr. Smith was born in 1888, and went out to Ceylon in 1912 as a Locomotive Foreman. He rose through the various grades to become Deputy General Manager, Operating Section, and the designation of this post was recently changed to Operating Superintendent. He is at present on leave in Great Britain.

The barony of the United Kingdom conferred by the King on Mr. F. J. Leathers, the Minister of War Transport, was gazetted on May 20 with "the name, style, and title of Baron Leathers, of Purfleet in the County of Essex." The letters patent are dated May 19.

We regret to record the death at Chicago on Saturday last, May 17, of Sir David John Owen, while on his way to London from Hong Kong. He was General Manager of the Port of London Authority from 1922 to 1938 and in August, 1940, accepted an invitation from the Government of Hong Kong to visit the Colony and advise on the administration of the port, where he has planned improvements. David John Owen was born at Liverpool on March 8, 1874, and was educated at Liverpool Institute. He served his business apprenticeship of 13 years with the Mersey Docks & Harbour Board, and then became Manager & Secretary of Paul Brothers, flour millers of Liverpool and Birkenhead. In 1908 he was appointed Assistant Manager to Goole Docks and seven years later became Manager. Soon afterwards, in 1915, he became General Manager of the Belfast Harbour Commission and Secretary to the Commissioners. He was appointed General Manager of the Port of London Authority in 1922; received his knighthood in 1931; and retired on September 30, 1938. Sir David Owen was a Past President of the Institute of Transport and was a member of the Central Water Advisory Committee; Chairman of the Anglesey & Caernarvon Agricultural Wages Committee; Past President, National Confederation of Employers' Organisations; Treasurer, National Council of Port Labour Employers; and a member of the executive committee of the Dock & Harbour Authorities' Association. In 1932-33 he was a member of the Royal Commission on Lotteries & Betting, and also served on the Holidays with Pay Commission. He was Chairman of the Merchant Shipping Reserve Advisory Committee, Board of Trade. Sir David Owen had the rank of Lt.-Colonel in the Territorial Army, Royal Engineers, Engineer & Railway Staff Corps. He was the author of the following books: "A Short History of the Port of Belfast"; "A History of Belfast"; and "The Port of London — Yesterday and Today"; and "The Origin & Development of the Ports of the United Kingdom."

The late Sir David J. Owen
General Manager, Port of London Authority, 1922-1938

We regret to record the death on May 10 of Mr. Thomas Ormiston Callender, a Director of Callender's Cable & Construction Co. Ltd. Mr. Callender, who was 45 years of age, was the only son of the late Sir Tom Callender, Deputy Chairman & Managing Director of the company. Mr. Callender was educated privately and at Cambridge, and, during the last war, served in France with the Royal Marine Light Infantry. He had travelled widely both with his father and alone. Among the places he visited was Trinidad, where he saw the famous pitch lake, the product of which played an important part on the insulating side of the cable business developed by his grandfather. Mr. Callender was a member of the Kent County Council, and was President of three of the company's social and athletic associations, including the Callender Works Band, so well known and liked by radio listeners.

The funeral of Mr. Callender took place at Erith Cemetery on May 14. In addition to the family mourners, there were present the following members of Callender's Cable & Construction Co.:—

Sir Malcolm Fraser, Bart., C.B.E., and Maj. General The Rt. Hon. Sir Frederick Sykes, P.C., G.C.S.I. both directors; Mr. C. Pipkin, Director & Joint Manager; Mr. Howard Foulds, Advisory Director & Secretary; Mr. E. M. Malek, Advisory Director; and Mr. Harold Flannery, Advisory Director.

Mr. John Wilfred Rodger, Chief Engineer of Bruce Peebles & Co., Ltd., is to be elected a Director.

TRANSPORT SERVICES AND THE WAR—91

Newspapers carry on—Railway repair after the blitz—Civilian casualties—The Baghdad Railway—Latin-American air lines

" But for the newspapers, Fifth Columnists would quickly become active, causing despondency and confusion." In these words Mr. J. H. Brebner, Director of the News Division, Ministry of Information, recently expressed the official view of the necessity for continuing the production of newspapers, despite difficulties caused by publication in areas heavily affected by air raids, and by shortage of materials. Probably there has never been such close co-operation between rivals as in the precious hours after an air raid when newspaper offices have been wrecked. During the famous Coventry raid of November 14, although newspaper offices were wrecked and printing plants destroyed, publication was arranged at Birmingham. Many of the London newspapers, of course, have subsidiary publishing arrangements in provincial cities and in Scotland, and on occasion these have been used to produce a far greater proportion of the total edition than normally. Plymouth papers have been printed at Exeter, and Southampton papers at Bournemouth, to quote merely a few examples, and the press slogan " the paper must go out " has inspired so many outstanding efforts that production has continued with remarkable success despite great difficulties. Emergency publication in other places, of course, involves transport problems, and the widespread and regular distribution of daily newspapers owes more to all forms of transport, both rail and road, than is likely to be made known while the war is still in progress.

Tunnel Repairs after Air Raid Damage

In German air raids over this country, railway tunnels have not escaped bomb damage, and the repairs have in some instances called for fairly extensive works. For example, a heavy bomb fell directly over a tunnel with a shallow cover, shattering the arch for part of its length and one of the side walls to a depth well below springing level, the clay from the crater filling the tunnel almost completely. Sheet piling was driven in the crater behind the side walls of the tunnel and struts put across the hole so that the reconstruction work could be carried out with the minimum of excavation. The sides were rebuilt in brickwork and the arch turned in mass concrete of aluminous cement, resulting in a particularly expeditious and satisfactory job.

In another instance the explosion of a bomb shattered two single line tunnels, again with only shallow cover, and a length was so badly damaged that it was decided to replace them by box construction on the cut-and-cover principle. Shuttering of sheet piling was driven at the sides of the damaged portions of the tunnels, and strutted across whilst the work was done. A row of steel stanchions was erected in the 6-ft. way to reduce the span of the new roof, which consisted of steel joists embedded in concrete. The work here was complicated by the presence of a large volume of water which had percolated into the tunnel and accumulated in a dip in the line. Relays of men were employed continuously on the work, and in due course the inflow of water was effectively staunched by means of the Joosten and Sika processes, and the tunnel again rendered completely dry.

Repairing Signal Damage

Extensive damage to signal installations and telephone cables occurred at two important centres which were struck by enemy bombs. In the first a very heavy bomb fell close to an important signalbox which had been built to A.R.P. standards. This box suffered no structural damage whatever, and the apparatus protected by the solid walls in the lower floor was completely uninjured. In the upper floor there was no serious damage, but it was necessary to dismantle completely the signal frame in order to clear it of broken and powdered glass. The wiring and apparatus generally were, however, uninjured. Outside the damage was extensive, particularly to signal and telephone cables and signal apparatus. A signal bridge in the immediate neighbourhood of the explosion was completely demolished and blown off the railway into a street some distance away. The damage to cables involved no fewer than 1,500 separate cores, and complete sections of cable were literally blown to pieces. An immediate start on repair work was made next day, and the telephone system was soon completely restored. Repairs to all cables, including jointing in a large number of additional pieces, were carried out. All the damaged signal gear outside was either repaired or replaced, and the whole work, including dismantling of the signal frame, was quickly completed and tested and in full operation again. In all 3,000 joints had to be made, before which, of course, the ends of the interrupted cables had to be identified to assure that the through jointing was carried out correctly.

A few days after this occurrence there was a very similar explosion at another important place, and almost exactly the same number of cables suffered damage. Owing to the situation in which the cables were run, the work here was more extensive and difficult. The damage not only put the signalling out of action, but affected no fewer than 375 separate telephone circuits. Within a short time, however, the repairs had been completed, and the station was once more in full operation. While the repairs to the signalling installations were being carried out traffic was conducted by hand-signalling.

The work of restoration in each instance has been expedited by the ready assistance (assembled within 24 hours) of cable firms, the Royal Corps of Signals, and the Royal Canadian Corps of Signals, and of workers from different parts of the railways concerned. Work was generally carried out throughout the 24 hours, wherever this was possible under blackout conditions, and proceeded regardless of air raid warnings, which in the periods concerned were frequent. It may be mentioned as a tribute to the efficiency of the work that, after tests, it was found that only two false joints out of 6,000 had been made, and this solely because in one instance a piece of cable, owing to shortage of material, had to be used as a bridge piece, which had a few more wires in it than the cables on opposite sides.

Air Raid Casualties for April

The Ministry of Home Security has announced the following figures of civilian casualties due to air raids on the United Kingdom during the month of April: Killed 6,065; injured detained in hospital 6,926. The killed are classified as: men 2,912, women 2,418, children under 16 years 680, unclassified 55. The injured are classified as: men 3,659, women 2,748, children under 16 years 519. In addition, 61 (of whom 48 were men, 6 women, and 7 children) are missing and believed killed.

The Thin Man has Lunch on the Train

The following is from the *Great Western Railway Magazine* for May:—

" Jim's picked a winner, getting quartered down there," said Marigold, as she and Sylvia sat in the luncheon car on the express to Paddington.

" He used to play a lot of cricket there, on the very ground in the park in front of the house, as a matter of fact."

She squashed her cigarette butt and began on the soup. Cricket meant a lot to Marigold. She went on: " Actually, it was on that very ground he took all 10 for 68 against the Free Foresters. There were four Blues playing, too."

It was a crowded train and everybody seemed to be taking the first lunch. Nevertheless, felt Marigold, it was a bit of bad luck that that bore, Blenkinsop, had asked if he might sit at their table. They could hardly say " no "; there were only themselves and a thin man in a grey suit and

pince-nez seated at it. It was Sylvia who said "But, of course," while Marigold gave her mind to lunch.

Even Sylvia didn't like him much as a matter of fact. Blenkinsop was the sort who thought he always knew everything and was always ready with the word in season.

"Hearty congratulations, Marigold. Good old Jim! Attached to Battalion Headquarters, what!"

Marigold didn't bother, but Sylvia said: "Divisional Headquarters, you mean. Ten times grander."

* * *

The thin man was sitting in his flat talking to a large man with no back to his head. They had discussed many things.

"By the way, what is a Free Forester?" Their last subject had been India, but the large man showed no surprise.

"A sort of cricketer."

"What is 10 for 68?"

"Eh? Sounds like a bit of darned good bowling."

"A man called Jim took 10—all 10—for 68 against the Free Foresters. I don't know what that means, but I wish I knew where it was."

"H'm. Very few people get 10 wickets in an innings, and the Free Foresters—they take some skittling. I've got one or two pals who might know about it."

He went to the telephone. After half an hour a voice at the other end was exclaiming: "Oh yes, Jim Browning, 10 for 68 at Blankchester Park. Hit my off-stump second ball—I was a *yard* late! But I don't think you'll get him to play for you this year—I believe he's a soldier now."

* * *

Everybody said it was terribly bad luck when a bomb dropped on Blankchester Park, causing several casualties. *The Germans couldn't possibly have known* that that was the home of Umpteenth Divisional Headquarters!

Travel Concession for the Merchant Navy

The Ministry of War Transport states that officers and men of the Merchant Navy proceeding on authorised leave from seagoing vessels may now recover from the Ministry the cost of one journey each quarter, instead of one each half-year as hitherto. This enlarged concession is operative as from April 1.

Delivering Canadian Bombers to England

In 1940 the Canadian Pacific Railway Company's air service department was created, under agreement with the British Ministry of Aircraft Production, to assist in the movement of bombers to England, and the delivery of them here to the Royal Air Force. The C.P.R. is acting under the instructions of the British Ministry, whose agent it is, and must for obvious reasons observe the strictest secrecy as to its operations. Accordingly, no precise information could be given to the recent annual meeting of the C.P.R., the proceedings at which were recorded on page 560 last week.

Pioneers and the Non-Combatants

As doubt appears to exist in some quarters as to the relative status of the Pioneer Corps and the Non-Combatant Corps (conscientious objectors), the War Office has issued a statement setting out the position. The Pioneer Corps was originally formed from 15,000 Reservists and Old Soldiers who had volunteered for further service, although they had passed the age for recall into Cavalry and first-line Regiments. Mention has already been made in these columns of the fine work done in France by these men, who on many occasions found themselves back in the front line and engaged with the enemy. As demands for labour increased, the Pioneer Corps was quickly expanded and most of the less fit of the Army Intake were drafted in.

On the formation of the Non-Combatant Corps—conscientious objectors—it was decided that, as the only use that could be made of these men, who are unarmed, was for labour, they should be attached to Pioneer Corps for administration purposes only, while specially selected officers and N.C.Os. from the Pioneer Corps should be put in command of these Companies. A Pioneer Corps man has to fight and has fought in this war, whereas an N.C.C. man, in order to become combatant and a member of the Pioneer Corps, has to make special application to relinquish his N.C.C. status. He may then be accepted as a soldier in the Pioneer Corps or any other unit he may apply for. N.C.C. personnel are thus an entirely separate unit; do not wear the Pioneer Corps badges; and, although used for many of the jobs allotted to the Pioneers, are attached to that Corps only for their general organisation and training.

Passenger Travel at Whitsun

On May 20 the B.B.C. broadcast a Ministry of War Transport notice asking the public to refrain from pleasure travel over the Whitsun holiday period, and pointing out that available transport would be required for essential purposes. It was added that no additional passenger services for holidaymakers would be provided.

Transport of Service Personnel in Canada

The Canadian railways have derived large revenues from carrying the personnel of the Army, Navy, and Air Force. From September 1, 1939, to February 28, 1941, the Canadian Pacific Railway was paid $2,628,832 and the Canadian National Railways $2,573,226.

South African "War Train" Touring Rhodesia

The South African Government "war train" has completed its 4,000-mile tour of the Union. On May 12 it left for Southern Rhodesia, at the invitation of the Southern Rhodesian Prime Minister, Mr. G. M. Huggins. The new tour, which will last about a fortnight, will include displays by South African troops accompanying the train. This train contains numerous exhibits demonstrating varied aspects of South Africa's war effort, including munitions and armoured cars produced in the Union. Further details were given at page 507 of our May 2 issue.

Collection of Scrap Metal in Rhodesia

At the request of the Southern Rhodesia Government, the Rhodesia Railways are co-operating in a scheme for the collection and conveyance of scrap iron and steel which has been delivered to railway stations by farmers, miners, and other members of the public for sale to the Government for war purposes. It is considered that there is a fair quantity of discarded farming implements, mining machinery, and such like, which can be made available for Rhodesia's war effort. The scrap is brought to the nearest station, where it is weighed and the stationmaster pays for the metal on behalf of the Government at the rate of £1 10s. a ton; the cost of the railage to the central depots at Salisbury and Bulawayo is also borne by the Government. The railways have recently reduced the rate on scrap metal in small quantities to the same scale as for truckloads. The scheme has since been extended to the road motor services operated by the Rhodesia Railways and low transport charges have been granted, the outside districts thus coming within the scrap metal "comb-out" for war purposes.

The Baghdad Railway

Recent events in Iraq have clearly shown the great significance and importance of the timely completion of the Baghdad Railway in the summer of last year—a matter to which we have drawn attention in these columns on more than one occasion in the early days of the conflict, and before the war had shown any very obvious signs of spreading to the Near East. In the report on the administration of the Iraqi State Railways for the year ended March 31, 1939, it was recorded that work on the construction of the final link between Baiji and Tel-Kotchek *via* Mosul had been proceeded with as vigorously as possible during the year, but that an exceptionally wet winter had proved a considerable handicap. Due to the necessity for opening the Tel-Kotchek to Mosul section as soon as possible for passenger traffic, work on the consolidation of the permanent way was further handicapped, and it took much longer in consequence to bring the track to the requisite standard. The earthwork on the section from Tel-Kotchek to Mosul was completed as far as As-Sabuniyah (25 km. from Mosul) on October 31, 1938. Track-laying was completed to the same point before the end of the year, and the line was formally declared open on January 1, 1939, and was opened to restricted passenger traffic on January 6. The first train to enter Iraq from Turkey was the Taurus Express, which arrived to time on January 8. The Iraqi

Traffic Manager travelled in charge of the train and was accompanied by the Chief Engineer and the Running Superintendent, as well as the Deputy Chairman and the Traffic Manager of the Chemin de fer Damas—Hama et Prolongements.

The work between As-Sabuniyah and Mosul was delayed on account of a considerable amount of rock encountered in the cuttings, but this section was also completed during the financial year 1938-39 and was opened to restricted passenger traffic at slow speeds, together with Mosul station, on March 31, 1939; the service was maintained by the Taurus Express only. The Traffic Manager of the Iraqi State Railways had attended the Simplon-Orient-Express Conference at Budapest in October, 1938, and arranged that the Taurus Express would run three times a week to Mosul when the railway was opened to that point.

On the section south of Mosul the work involved a 120-mile extension from Baiji (then the railhead from Baghdad) through Sharqat to Mosul. It may be recalled that the first 74 miles of the Baghdad Railway northward of Baghdad were built by German engineers. In the course of the operations around Baghdad during March, 1917, the first ten miles fell into British hands and control of the entire line, 118 km. (74 miles) long, was obtained during the next month when our troops captured Samarra station. In September, 1918, this section was extended northward to Tekrit and was eventually completed as far as Sharqat, 186 miles north of Baghdad and some 60 miles south of Mosul. The last 54 miles of this line beyond Baiji were subsequently dismantled and until recently Baiji was the terminus for some years.

By the end of March, 1939, the earthwork from Baiji to Jernaf was practically complete, and departmental work had been begun between Jernaf and Shora. Between Shora and Mosul the work was let out to contract. This was a very difficult section of broken country involving deep rock cuttings and high banks. Some 9 km. (5½ miles) south of Mosul there was also a tunnel 1,039 yd. long. Headings driven from opposite ends met in the middle on March 16, 1939. The railway between Baiji and Qayarah was opened on January 8, 1940, and the remaining portion between Qayarah and Mosul was brought into public service on July 17 last, completing the Baghdad Railway from the shores of the Bosphorus on the standard gauge of 4 ft. 8½ in. right through to the Iraqi capital. This railway was illustrated and described in THE RAILWAY GAZETTE of August 30 and September 13, 1940.

Railways in France

For some time past it has been rumoured that Germany was pressing the Vichy Government to permit the use of the railway through Pau (in "unoccupied" France) to Zaragoza, for the passage of German troops to Spain. The use of this line is desired because the Bordeaux to San Sebastian railway, in Occupied France, is insufficient for carrying troops in large numbers.

On May 14 the Vichy Cabinet unanimously approved Hitler's terms to Admiral Darlan for closer collaboration between Germany and the Vichy Government. According to Vichy, the terms of the agreement include the following points:—

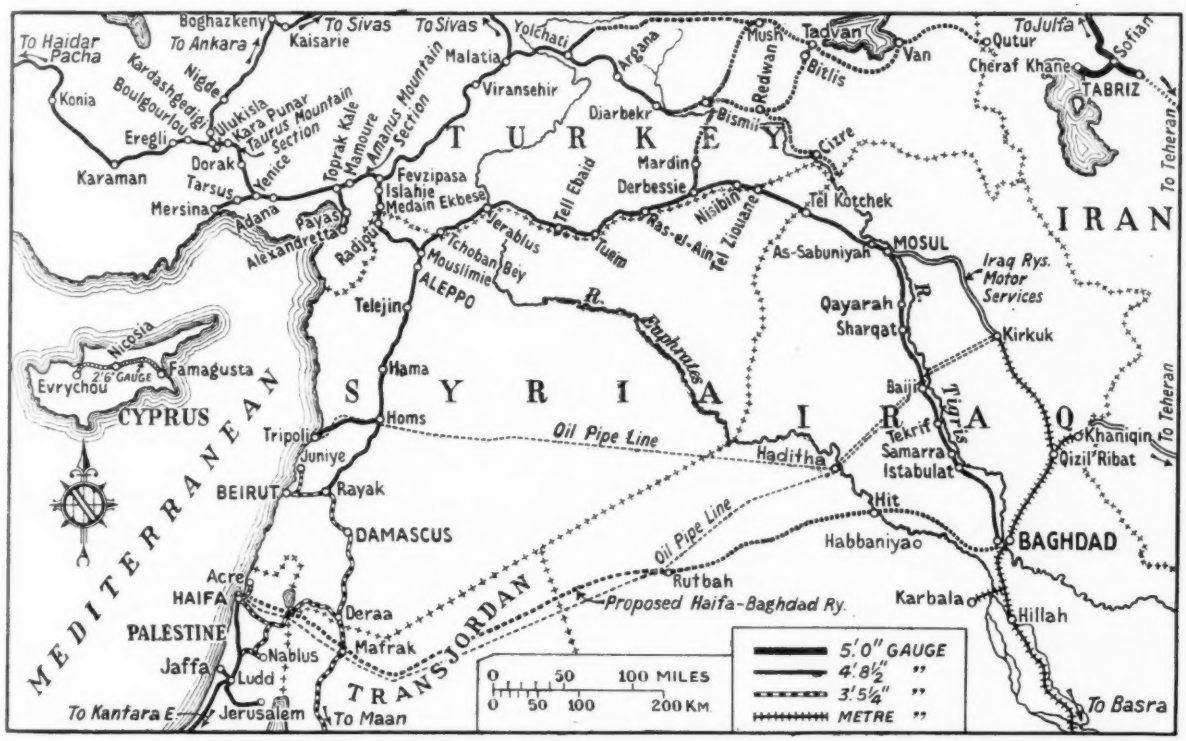
The demarcation line between occupied and unoccupied France will be open, in general, for the passage of goods and securities. Specified raw materials are excepted.
Persons will be allowed to travel between the two zones in the event of serious illness or the death of near relatives.
Free correspondence between the two zones by plain post-cards will be permitted.

This agreement is expected to come into force at the end of May.

Direct railway communication for passengers and goods was to be re-established between "Unoccupied" France and Hungary, *via* Italy, "in the course of the next few days," according to a Budapest dispatch dated May 9 to the Official German News Agency.

The Railways of Alsace-Lorraine

The Alsace-Lorraine lines, which passed to Germany under the Treaty of Frankfort of May, 1871, were greatly extended and improved by the German administration, to meet both civil and military requirements. In 1870 there was only one Rhine bridge served by them, that between Strasbourg and Kehl, part of the through main route from Paris to Vienna *via* Southern Germany. In 1878, however, three new Rhine crossings were opened, connecting Colmar to the river at Altbreisach, Mulhouse to the river at Eichwald, and St. Louis to the river at Hüningen, and all leading to the Baden State Railways on the east bank of the Rhine. In 1895 another



The railways of Syria and neighbourhood (see editorial article on page 567)

cross river connection was made near Röschwoog. In the 1914-19 war Alsace-Lorraine formed a very important military area behind the German front and the railways had to contend with great difficulties. Several important works were undertaken by the management and the military engineering staff, such as conversion to standard gauge of the Colmar—Bollweiler line *via* Ensisheim, enlargement of Strasbourg goods yard, the four tracking of the line between Hagendingen and Thionville.

In addition, new lines were built, comprising St. Louis to Waldighofen in 1915; and the Ensisheim to Habsheim, Amanweiler to Gravelotte, and Neubreisach to Bartenheim sections in 1916 and 1917. The last-named paralleled the Colmar—Basle line for a long way. All these lines were built by the military staff. On the Alsace-Lorraine lines on Luxembourg territory the civil authorities doubled the Berg—Ulflingen line and laid in a connecting spur between Berchem and Ötringen, later disused. The military authorities four-tracked the Bettembourg—Luxembourg line. From August 1, 1915, to July 31, 1917, about 200 km. (125 miles) of track was laid, including sidings and other facilities. How far these lines have been used since is not clear, but they were probably incorporated in French military plans. France, of course, has built new lines through the Vosges since 1919. It is understood that, at the time of the collapse of France, only Kehl bridge was still standing.

Whitsun Travel in Germany

An appeal to the German people not to travel during the Whitsun holiday was broadcast on the German radio on May 10. The announcer stressed the necessity for restricting the civilian use of the German railway system.

Railway Nationalisation in Germany

On May 1 the undertaking of the Eutin-Lübecker Eisenbahn Gesellschaft, said to be the last of the German private companies operating main-line sections, was taken over by the Reichsbahn for reasons of war, according to the official announcement. The whole of the staff was transferred to Reichsbahn service. The company operated the Lübeck-Eutin main line, 33 km. (20½ miles), and a branch from the main-line station of Ponitz to Ahrensbok, 8 km. (5 miles long). The main line is part of the direct Berlin-Kiel route, over which all the fast expresses between the two cities are worked. A section of the main line is also included in the new through route between Germany and Denmark *via* Fehmarn, which has been planned by Reichsbahn and the Danish State Railways under German sponsorship. The Eutin-Lübeck Railway, which of course is standard gauge, was shown in the latest returns as owning 12 locomotives, 44 carriages, and 141 wagons.

Soviet—Hungarian Railway Agreement

As recorded on page 405 in our issue of April 4, direct railway communication between Hungary and Soviet Russia was resumed on March 23, in accordance with an agreement signed in Moscow on March 1, after a break of over 20 years. The four lines linking these countries through Russian-occupied south-eastern Poland, are (from west to east): (*a*) Budapest—Uszok—Sianki—Lwow; (*b*) Budapest—Volocz Kisszolyva)—Lawoszne (Beskid)—Lwow; (*c*) Budapest—Körösmezö—Woronienka—Lwow, and (*d*) Budapest—Oraseni—Cernauti and thence either to Asienow (Polny) or Atachi and Mohilev. The first line chosen for the restoration of through communication is line (*b*), of which both the Hungarian and the Russian sections are single track; in Hungary the gauge is 4 ft. 8½ in. and in Russia it is 5 ft., having been converted from the European standard gauge after the Russian occupation.

To overcome difficulties in connection with the break of gauge it has been agreed that the section between the Hungarian frontier station Volocz (Kisszolyva) and the Russian frontier station Lawoczne (Beskid)—a distance of 15·5 miles through the Carpathian mountain range—is to have both gauges. Trains coming from Russia will go south as far as Volocz, and trains coming from Hungary as far north as Lawoczne, so that the transhipment of passengers, goods, and parcels will take place in the country of destination. As the laying of the second track entails considerable construction work in the widening of tunnels, viaducts, and bridges, it was furthermore agreed that, during the transitional period transhipment should take place at Lawoczne (Russia), as the European standard gauge already enters that station.

With the introduction of the summer timetable one daily fast train in each direction between Budapest and Moscow is foreshadowed, the journey taking 50-52 hr. The distance between Budapest and Volocz is 257 miles, between Volocz and Lawoczne 15·5 miles, and between Lawoczne—Strij and Lwow 91·3 miles. Further distances are: Lwow—Zdolbunow—Rowne—Baranowice—Stolpce 344 miles, Stolpce—Niegoreloje—Minsk—Moscow 495·6 miles, so that the overall distance from Budapest to Moscow by this route is 1,203 miles.

Bulgarian Transport

Many anti-Nazi Bulgarians are said to have fled to Soviet Russia through Roumania, and the German authorities have now imposed strict frontier control.

Refugees from Bulgaria state that the two heavy R.A.F. raids on Sofia caused extensive damage, and completely gutted the two railway stations; a temporary building now serves as a station.

Latin-American Air Lines

The U.S.A. Government is considering an air line which may serve Latin America, the West Indies, and perhaps even Greenland. Mr. Jesse Jones, Federal Loan Administrator, has declined to give details of the plans because they concern national defence.

An aircraft of L.A.T.I. (Linee Aeree Transcontinentale Italiane) was recently fined $1,000 for making a flight across Brazilian territory without previous permission in contravention of the Brazilian Neutrality Regulations and of the company's agreement with the Brazilian Government. The authorised service is only along the coastal regions, with stops at Pernambuco, Bahia, Rio de Janeiro, Santos, and Porto Alegre. The company was warned that if further unauthorised flights were made its permit to operate in Brazil would be withdrawn.

Argentina and Chile were stated on May 12 by the German-controlled Paris radio to have authorised Air France to resume the regular air line between France and South America. The Brazilian Air Ministry was reported on May 9 to have refused permission to Air France to operate an air line between Rio de Janeiro, Buenos Aires, and Santiago.

The German-owned S.E.D.T.A. air line in Ecuador is expected to be suspended at the end of May, as the Talara Oil Company of Peru (a subsidiary of the Imperial Oil Company of Canada) has refused to supply any further petrol.

Bolivia is considering taking over the undertaking of the Lloyd Aereo Boliviana, one of the network of German-controlled air line companies in South America.

A weekly air mail service between Buenos Aires and Puerto Aguirre, on the Brazilian border, with intermediate stops at Monte Caseros (Corrientes Province) and Posadas (Misiones Province), has been begun by the Argentine Air Force, according to a message dated May 3.

A Year Ago

During the nine months that British Forces were in France they are stated semi-officially to have established 17 supply bases and laid 141 miles of standard-gauge railway. We left behind over a month's reserve supplies of food and ammunition, and working supplies for 15 days, all of which was secured by the Germans, together with much of our heavy equipment, but the Germans obtained none of the British tanks.

During the German invasion of Belgium more houses were demolished than during upwards of four years of the last war, according to the Free Belgian News Agency. In the 1940 campaign, 150,698 houses are estimated to have been destroyed or damaged. In 1914-1919 only about 100,000 were affected. In addition, 1,456 bridges, locks, and other constructions, and 100 miles of railway line were destroyed. Further details of transport destruction in May of last year were given in our issues of January 17 (page 78) and February 7 (page 152).

STAFF AND LABOUR MATTERS

Railway Wages

The Railway Staff National Tribunal began the hearing of the claims for an increase in the special war advance on Tuesday, May 6, and the public hearing finished at midday on May 7.

N.U.R. Claim

Mr. Marchbank, in presenting the claim of the National Union of Railwaymen, opened his statement by giving a brief history of the minimum rates of pay of railway staff and the existing war advance. The minimum rates for conciliation staff, awarded by the tribunal in its Decision No. 6, were 50s. London, 48s. Industrial, and 47s. Rural, with a cost of living figure of 55, and he argued that to retain the standards which these rates of pay represented on a cost of living figure of 55, they should be increased to 63s. 9d., 61s. 3d., and 60s. respectively now that the cost of living figure had risen to 98. He did not regard the Ministry of Labour index figures as properly representing the increase in the cost of living because the outgoings in respect of working class households are not properly covered by the figures, and he submitted that the claim of 10s. would barely cover the changes in the cost of living. A driver with a rate of pay of 90s. at the outbreak of war would require an additional 25s. to preserve the standard which he enjoyed before the war, and a member of the salaried staff with a salary of £350 a year would require a further £97 to maintain these standards.

In dealing with the financial position of the companies, Mr. Marchbank made reference to the Government White Paper (Cmd. 6168), which outlines the financial arrangements between the Minister of Transport and the companies for the control of the railways, and the White Paper (Cmd. 6252) giving particulars of the estimated pooled receipts and expenses and net revenue for the year ended December 31, 1940. He also referred to the report of the Transport Advisory Council in connection with the question of the railways and conveyance of merchandise by rail, and stated that it was recognised that variations in working costs, which include salaries and wages, must be taken into account in fixing rates and fares and charges. The obvious inference to be drawn from this, he said, is that it is perfectly proper to expect that the respective incomes of the companies should be so adjusted as to meet the charges and working costs which might arise by reason of the war, and he suggested that on income already achieved the claim should not be judged, but that it would be looked at from the standpoint of the ability of those people who are the mainstay of the industry and that they would be placed in a position which will enable them to undertake their respective duties.

Another factor to be taken into consideration in connection with the claim was the difficulties under which railwaymen are working at the present time, and Mr. Marchbank dealt at some length with the conditions under which the men have to carry out their duties and the hardships imposed upon them by rationing owing to their inability, in many cases, to take their meals with their families.

A.S.L.E.F. Claim

Mr. Allen, in presenting the claim of the Associated Society of Locomotive Engineers & Firemen, said that he was speaking on behalf of some 60,000 men working in the capacity of driver, fireman, motorman, and cleaner, and the claim was submitted under two headings, the adverse effect on wages of the continued rise in the cost of living and the growing importance of railway work. On the cost of living index figures as published by the Ministry of Labour, there had been an increase of 27·7 per cent. in the cost of living since the outbreak of war but, he argued, these figures were out of date and did not represent the changes which have taken place in the methods of living since the basis of these figures was agreed. The increase in cost of living, as shown by these figures, represented a reduction in purchasing power of 21·7 per cent. and he submitted a statement which demonstrated that, in the case of the driver rated at 90s., the fall in value due to the increase in the cost of living was 19s. 7d., and including the 7s. war advance the fall in value was 21s. 1d. In the case of the fireman rated at 72s. the fall in value was 15s. 8d., and 17s. 2d. if the war advance of 7s. were added to the rate. A further statement purported to show the effect of conceding the claim in full. This showed that, in the case of the driver rated at 90s. with the 7s. special war advance, plus the 10s. claimed, the increase in wages would be 18·9 per cent. as against the increase in cost of living of 27·7 per cent.; in the case of the fireman the average increase would be 26·5 per cent. and for engine cleaners 31·3 per cent.

Mr. Allen dealt at length with the question of the growing importance of railway work and the increasing difficulties in performing it. He drew attention to the difficulties of engine preparation and train working during the black-out and the risks and danger of working during air raids. He summed up this part of his case by saying that the work of railwaymen in general, and of certain grades in particular, has been made more difficult by the incidence of the war and that, expected as they are, to keep the industry at the highest point of efficiency, he was justified in claiming that the men should get some consideration more than they are getting at the present time.

He made reference to the railway agreement and indicated that the financial results of 1940 were considerably better than those for 1939, stating that total receipts had increased by 21·99 per cent., while working expenses for enginemen had increased in the same period by 17·22 per cent.

R.C.A. Claim

Mr. Gallie, in presenting the claim of the Railway Clerks' Association, said that he represented 70,000 members of the salaried and supervisory staffs, and he asked the tribunal to consider the claim much more on the basis of human standards and human requirements than in the cold and calculating light of economics. Dealing with the effect of a rise in wages on the vicious spiral, he referred to the proceedings of the Charges Railway Control Consultative Committee last September, and said that the committee found that the further increases of charges proposed should have no appreciable effect on the cost of food. It was estimated that the increased rates would raise in a full year £15 millions, and this figure was a reasonable approximation of the cost of the claims now submitted. The claim was submitted under four heads, the additional risk run by the staff; the further strain imposed upon them; their increased contribution to the national effort; and the increased cost of living. He quoted railway receipts for the years 1938, 1939, and 1940, and the numbers of staff employed in those years, pointing out that, in the year 1939, the average receipts per employee was £312 17s. 9d., an increase of £28 18s. 5d. over 1938, and for 1940 an average of £385 17s. 10d., or a further increase of £73 0s. 1d. per employee. Therefore, since 1938 the average receipts per employee had increased by £101 18s. 6d. From these figures it was argued that there had been increased strain, increased effort, greater initiative and, in many respects, greater economy to produce them, and that the salaried staff have made a very substantial contribution to that result in very difficult circumstances. He dealt at some length with the difficulties which the salaried staff have to contend with as a result of the war.

He contended that the bonus of £18 which is being paid does not now represent the purchasing value that it did when conceded, but had been reduced to approximately £13. He submitted a number of charts to show how the rise in the cost of living had affected the grades represented by the Railway Clerks' Association by reducing the purchasing value of their salaries. He drew special attention to the rise in the price of clothing which, he said, bears very harshly upon the railway clerk, and he introduced it because it is a factor which does not arise to the same extent with many other workers, or even with many other grades of railwaymen.

Railway Companies' Reply

Mr, G. L. Darbyshire, replying on behalf of the railway companies, said

that the number of staff covered by the claim was 329,000 conciliation grades and 82,000 salaried grades, which represented 73 per cent. of the total staff employed. He outlined the present basis of railway wages, stating that the present rates were agreed in 1919 and 1920 when the cost of living figures stood at 115 and 125, or 215 and 225 as compared with 100 in 1914. His review of wages included the war advances paid from January and June last year which, he said, cost the companies £11,954,000 a year, including the effect on the balance of civil pay for staff serving with the Forces. The present claim was estimated to cost £12,403,000 for staff before the tribunal, with an additional £3,208,000 for staff who would have a claim to a corresponding advance, and a further £1,140,000 in make up of balance of civil pay to staff serving with H.M. Forces, making a total cost of £16,751,000.

He could not accept the argument of the trade unions that wages should rise in exact relation to the cost of living which had risen by almost 28 per cent. since the outbreak of war. When the cost of living was falling such a basis was not adopted, and there was no justification for introducing such a method now that the cost of living was rising.

In dealing with the increase in the cost of living, Mr. Darbyshire submitted statements showing the effect on real wages of salaried staff, conciliation staff, and enginemen. These statements purported to show in the case of salaried staff that the value in purchasing power of the rates paid in April, 1941, taking into account the difference in the cost of living, exceeds that of the standard rates operating in January, 1920, by amounts varying from £42 in the case of the individual on a salary of £218 (the maximum of the class 5 scale) to £60 in the case of the individual on a salary of £368 (the maximum of the class 1 scale). The betterment for all conciliation grades was 9s. 10d., and for the porter, grade 2, 6s. in the London area, 5s. 9d. in industrial areas, and 4s. 9d. in rural areas. The comparison in the case of enginemen was with August, 1919, and revealed a betterment ranging from 18s. 8d. in the case of the man on the first year's rate to 11s. 6d. in the case of the driver on the maximum rate. The figures for the firemen were 11s. 6d. for a man on the first year's rate, rising to 12s. 8d. for a man on the maximum rate. The betterment for cleaners was 8s. 2d. in London and 6s. 2d. in other areas. Another statement showed that the betterment in real wages of all conciliation staff compared with 1914 was 14s. 11d. From these figures it was argued that, while the purchasing power of wages is less now than at the outbreak of war, it is greater than it was at the time such wages were agreed as appropriate.

The reference by Mr. Gallie to the increase in the cost of clothing was dismissed by pointing out that such increase was duly reflected in the cost of living figures published by the Ministry of Labour.

A further test as to the adequacy of present wages was applied by comparing them with the rates of pay at the time when the cost of living figure was last at the same level as it is at the present time, and it was stated that, with the exception of about 4,000 men, all were receiving as much as, or more than, was due under the cost of living sliding scale when the cost of living figure was at the same level as at the present time.

Comparing the present war advance of 7s. with what would have been paid under the cost of living sliding scale it was pointed out that 8s. would have been paid under the sliding scale from 1st January, 1941, to a limited number of staff, but the majority of the staff would not have been entitled to any advance at all and they, therefore, benefited by 7s. a week.

Dealing with the question of additional risk and strain which the staff were called upon to undertake under war conditions, Mr. Darbyshire said that the railway managements desired to make acknowledgment of the good work which has been done by the railway staffs in carrying on their duties under very trying conditions, and the observations which he had to make on this aspect of the case were not intended to detract in any way from the excellence of the service which has been maintained by the staff generally under wartime and air raid conditions. He suggested that railwaymen do not stand alone in this respect, and that each industry should bear its own risks without making them a ground for exceptional treatment in the direction of increased wages. Such risk and strain, he said, is part of the contribution which each one of us is called upon to make in the war effort. To meet the risk and strain to some extent, he said that the companies had decided that, in the case of staff who are injured by enemy action whilst on duty, the allowance to which they are entitled under the Government scheme shall be supplemented by the railways to full pay for a period up to six months.

In his review of the ability of the industry to meet the additional cost which would be imposed by the claims, Mr. Darbyshire said that he proposed to start with the year 1929, which represented the best year from the point of view of net revenue for the past 17 years. In that year the net revenue was £44·9 millions and fell short of the "standard revenue" by £5½ millions. 1930 was a much worse year with a net revenue of £37·7 millions and, on the results of that year, the National Wages Board awarded the companies relief from labour costs to the extent of £3·6 millions which, with other corresponding arrangements, was increased to £4½ millions. He suggested that the National Wages Board, by its award, recognised that net revenue had a claim to be restored to something over £40 millions. Net revenue for 1940 was only £38·6 millions. Referring to previous decisions of the Railway Staff National Tribunal he suggested that, up to the outbreak of the war and the Government taking over control of the railways, the tribunal was satisfied that the financial position of the railways was not such as to justify a general rise in standards.

Dealing with the railway agreement, he submitted that the fact that there is provision in that agreement for passing on to the public all increased charges resulting from increased wages, does not warrant increases which are not otherwise justified on their merits.

Mr. Darbyshire then turned to other important industries and gave particulars of war increases which had been granted in such industries as building, civil engineering contracting, coal mining, engineering and shipbuilding, iron and steel, docks, road transport, printing and bookbinding, and agriculture, also to civil defence services, and he suggested that the comparisons which are of the greater significance are those in the industries which have received consideration by independent tribunals. These included shipbuilding and engineering, in which the total war increase is 8s. 6d., the road transport with an increase of 11s., the printing and bookbinding, in which the increase is 5s.

Trade Unions' Reply

Mr. Marchbank, in his rejoinder to the statement made on behalf of the railway companies, compared the minimum rate of 60s. in the civil defence services with the minimum rate of 47s. on the railways, and suggested that, if the tribunal had been discussing basic rates, the claim would have been for something more than 10s. a week. He referred to the argument advanced on behalf of the companies in regard to real wages as a theoretical expression as to wages and real wages which would not satisfy the thousands of men and women who to-day are suffering from the decreased value of the money they earn, and he suggested that the realities of the situation must be examined rather than comparisons of a situation existing 20 years ago. He could not accept the reply that, compared with 1919 or 1920, the staff were relatively better off.

Mr. Allen, on behalf of the Associated Society of Locomotive Engineers & Firemen, could not accept the rates fixed in 1919 as being permanent, and he referred to the many changes in railway operation which have taken place since that time in justification of a change in the standards then agreed. He could not agree that the risks and strain should not be met by an increase in pay, nor could he accept the argument that the financial position of the companies does not enable the claim to be met.

Mr. Gallie, of the Railway Clerks' Association, contended that no argument had been advanced against the claim which could not have been used by the companies when they conceded the present war advance. He could not accept the comparisons with 1920, as they were now dealing with a new

generation of people who expect to be dealt with in relation to the conditions operating in their employment when they come into that employment and any changes which have arisen since. Nor could he agree that the salaries fixed in 1920 were based on the cost of living figures then ruling and, in support of his view, he quoted from a decision of the National Wages Board of January, 1933, in which the Chairman said "It is inconceivable that the Government or a Government Department, with the returns and statistics of the Ministry of Labour and the Board of Trade available, would have made the national agreements without a careful consideration of the level of railwaymen's salaries and wages before the war, both in relation to the nature of the work done and its responsibilities and in comparison with salaries and wages in other industries. I have no doubt that both these matters were taken into account in the settlement arrived at in the national agreements. I am satisfied on the evidence that, in the settlement of wages and working conditions by the national agreements, three things were established: (*a*) The wages of railway servants were at the beginning of the war unduly low; (*b*) the new standards of pay were intended to remedy this position and were related to the skill necessary for the responsibility of the work; and (*c*) the new standard salaries and rates of pay were agreed as permanent standards."

Decision of Tribunal

The decision of the Railway Staff National Tribunal was issued on May 15 and states that the tribunal has given careful consideration to the statements and submissions of the parties and awards as follows :—

ON THE CLAIM BY THE N.U.R.

(1) That as from January 6, 1941, the then existing special war advances granted to the undermentioned staff employed by the railway companies named in the Railway Control Order dated September 1, 1939 (excluding the staff of the London Passenger Transport Board) and covered by the National Agreements shall be increased by the following amounts :—

(*a*) Conciliation Staff :—

Adult males	4s. a week
(making a total war advance of 11s. a week)	
Junior males	2s. a week
(making a total war advance of 5s. 6d. a week)	
Adult females	3s. a week
(making a total war advance of 8s. 3d. a week)	
Junior females	1s. 6d. a week
(making a total war advance of 4s. 3d. a week)	

(*b*) Salaried staff and staff paid on salary equivalent rates :—

	Salaried staff	Staff paid salary equivalent rates
Adult males ...	£10	4s. a week
(making a total war advance of £28 a year for salaried staff and of 11s. a week for staff paid salary equivalent rates)		
Junior males ...	£5 a year ...	2s. a week
(making a total war advance of £14 a year for salaried staff and of 5s. 6d. a week for staff paid salary equivalent rates)		
Adult females ...	3s. a week ...	3s. a week
(making a total war advance of 8s. 3d. a week for salaried staff and for staff paid salary equivalent rates)		
Junior females ...	1s. 6d. a week	1s. 6d. a week
(making a total war advance of 4s. 3d. a week for salaried staff and for staff paid salary equivalent rates)		

(2) The additional amounts set out in clause (1) above shall be taken into consideration in calculating overtime, Sunday duty and night duty payments, also aggregation allowances, but shall not be taken into consideration in connection with superannuation or pensions.

ON THE CLAIM BY THE A.S.L.E.F.

(1) That, as from January 6, 1941, the then existing special war advances granted to the undermentioned staff employed by the railway companies named in the Railway Control Order dated September 1, 1939 (excluding the staff of the London Passenger Transport Board) and covered by the National Agreements shall be increased by the following amounts :—

Drivers, motormen, firemen, and engine cleaners :—

Adult males	4s. a week
(making a total war advance of 11s. a week)	
Junior males	2s. a week
(making a total war advance of 5s. 6d. a week)	

(2) The additional amounts set out in clause (1) above shall be taken into consideration in calculating overtime, Sunday duty and night duty payments, also aggregation allowances, but shall not be taken into consideration in connection with superannuation or pensions.

ON THE CLAIM BY THE R.C.A.

(1) That as from January 6, 1941, the then existing special war advances granted to the undermentioned staff employed by the railway companies named in the Railway Control Order dated September 1, 1939 (excluding the staff of the London Passenger Transport Board) and covered by the National Agreements shall be increased by the following amounts :—

Salaried staff and staff paid on salary equivalent rates :—

	Salaried staff	Staff paid salary equivalent rates
Adult males ...	£10 a year ...	4s. a week
(making a total war advance of £28 a year for salaried staff and of 11s. a week for staff paid salary equivalent rates)		
Junior males ...	£5 a year ...	2s. a week
(making a total war advance of £14 a year for salaried staff and of 5s. 6d. a week for staff paid salary equivalent rates)		
Adult females ...	3s. a week ...	3s. a week
(making a total war advance of 8s. 3d. a week for salaried staff and for staff paid salary equivalent rates)		
Junior females ...	1s. 6d. a week	1s. 6d. a week
(making a total war advance of 4s. 3d. a week for salaried staff and for staff paid salary equivalent rates)		

(2) The additional amounts set out in clause (1) above shall be taken into consideration in calculating overtime, Sunday duty and night duty payments, also aggregation allowances, but shall not be taken into consideration in connection with superannuation or pensions.

Salaries of Insurance Staff

Arising out of a dispute between the Guild of Insurance Officials and the Scottish Legal Life Assurance Society the National Arbitration Tribunal has awarded the scales of salaries for the chief office staff of the society as shown in the table at the top of the next column.

Where an employee is transferred from one grade to a higher grade, the salary payable on promotion shall be the minimum salary of the new grade; provided that where a worker is transferred from grade III to grade II at or over the age of 35 he shall be treated throughout his service in grade II as having, at the time of his transfer to that grade, already completed one year's service in such grade. For the purpose of the application of the foregoing scales, the grading shall follow the existing grading except that the scale for grade III shall apply to work at present comprised within grades III and IV.

Male employees :—	s.	d.
(*a*) Grade III—		
Employees under 17 years of age	18	0
Employees of—		
17 and under 18 years of age	21	0
18 ,, 19 ,, ...	25	0
19 ,, 20 ,, ...	30	0
20 ,, 21 ,, ...	36	0
21 ,, 22 ,, ...	42	0
22 ,, 23 ,, ...	48	0
23 ,, 24 ,, ...	55	0
24 ,, 25 ,, ...	61	0
25 ,, 26 ,, ...	66	0
26 ,, 27 ,, ...	68	6
27 ,, 28 ,, ...	71	0
28 ,, 29 ,, ...	73	6
29 ,, 30 ,, ...	76	0
30 ,, 31 ,, ...	78	6
31 ,, 32 ,, ...	80	6
32 ,, 33 ,, ...	82	6
33 ,, 34 ,, ...	85	0
34 ,, 35 ,, ...	87	6
35 ,, 36 ,, ...	90	0
36 ,, 37 ,, ...	92	6
37 years of age or over	95	0

(*b*) Grades II and I—	Grade II s.	Grade I s.
During—		
1st year of service in the grade ...	90	140
2nd ,, ,, ,, ...	95	140
3rd ,, ,, ,, ...	95	145
4th ,, ,, ,, ...	100	145
5th ,, ,, ,, ...	100	150
6th ,, ,, ,, ...	105	150
7th ,, ,, ,, ...	105	155
8th ,, ,, ,, ...	110	155
9th ,, ,, ,, ...	110	160
10th ,, ,, ,, ...	115	160
11th ,, ,, ,, ...	115	165
12th ,, ,, ,, ...	120	165
13th and subsequent years of service in the grade	—	170
13th year of service in the grade ...	120	—
14th ,, ,, ,, ...	125	—
15th ,, ,, ,, ...	125	—
16th and subsequent years of service in the grade	130	—

Female employees—	All employees s.
Employees under 17 years of age	18
Employees of—	
17 and under 18 years of age	21
18 ,, 19 ,, ...	24
19 ,, 20 ,, ...	27
20 ,, 21 ,, ...	30

	Shorthand typists s.	All employees other than shorthand typists s.	d.
Employees of—			
21 and under 22 years of age	39	35	0
22 ,, 23 ,,	42	37	6
23 ,, 24 ,,	45	40	0
24 ,, 25 ,,	48	42	6
25 ,, 26 ,,	51	45	0
26 ,, 27 ,,	54	47	6
27 ,, 28 ,,	57	50	0
28 years of age or over ...	—	53	0
28 and under 29 years of age	60	—	
29 years of age or over ...	63	—	

The new scales operate from the first full pay after April 29, 1941.

CAUSES OF FATAL ROAD ACCIDENTS.—The Royal Society for the Prevention of Accidents has analysed inquest reports relating to some two-thirds of the deaths resulting from road accidents in the four months September to December, 1940. In Road Accident Bulletin No. 6, accidents involving military traffic are dealt with, and it is shown that service vehicles comprised 11 per cent. of all the vehicles involved in fatal collisions.

RAILWAY AND OTHER MEETINGS

Beyer, Peacock & Co. Ltd.

Having regard to the present exceptional times, the board of Beyer, Peacock & Co. Ltd. considered it desirable that no speech should be delivered at the actual meeting of the company on May 20. The Chairman (Captain Hugh Vivian, M.I.Mech.E.) has accordingly circulated with the report and accounts a short review of the balance sheet and the company's affairs for the year 1940.

In the course of this review Captain Vivian said that the net profit for the year was £53,377, a slight increase over the figure for the previous year, but the net profit shown on the balance sheet was subject to provision for Excess Profits Tax from April 1, 1939, to December 31, 1940. The company's liability in respect of E.P.T. was not yet determined. It was hoped, however, that the representations made with a view to obtaining some additional relief in the operation of this tax on the grounds of undue hardship might bear fruit. It would be apparent that on this company, which at the beginning of the war was deriving some benefit from the efforts made during a prolonged depression in the industry, the present scale of taxation and the methods laid down by law for computing excess profits had imposed a burden entirely beyond what must have been intended by Parliament. The locomotive industry as a whole had suffered from the formula selected by the Government as a basis for the Excess Profits Tax. This company, in particular, was a victim and unless some relief was obtained would have to bear what could be regarded as more than its fair share of the necessarily heavy load of war taxation.

Continuing his review, Captain Vivian said: You will remember that last year we completed six Beyer-Garratt locomotives of the 4-8-4+4-8-4 type for the Kenya & Uganda Railways, and these were the largest metre-gauge locomotives in the world and the first to have this wheel arrangement. During 1940 we completed another six and further advices from this railway refer to the complete satisfaction they are giving.

The principal new design of Beyer-Garratt locomotive completed during the year was a semi-streamlined type, having a 4-6-4+4-6-4 wheel arrangement, and the order was for four such locomotives. These engines, embodying our very latest experience, were designed and built at our works under the stress of war conditions and shipped in 1940. Arriving safely in Rhodesia, they were immediately placed in service and have already completed 250,000 miles. They are employed on passenger and goods trains between Bulawayo and Salisbury and have put up mileages of between 6,000 and 7,000 miles a month, and we are officially advised that the engines have been conspicuous for the complete absence of any mechanical defects or even the necessity for the usual initial minor adjustments. The engines are the largest 60 lb. rail passenger locomotives in the world and on this light-rail, narrow-gauge (3 ft. 6 in.), and heavily-graded section haul passenger loads of 500 tons and goods trains of 1,050. The locomotives are capable of a speed of 60 m.p.h. They have also shown themselves to be remarkably efficient engines from the coal consumption and maintenance point of view. That such a locomotive has been designed and built in our works during present times, and has given from the outset such excellent performance, is an achievement of which we can rightly be proud.

We have also heard that other locomotives, of both the ordinary type and the Beyer-Garratt type, designed by us in the last two or three years and supplied to Brazil, South Africa, India, Nigeria, and the Gold Coast continue to give the very best service, which confirms that we are maintaining our reputation for excellence of design and manufacture of all types of locomotives.

Parliamentary Notes

Superannuation Bills

The Great Western Railway (Superannuation Fund) Bill, which was reported without amendment to the House of Lords on May 6, was read a third time and passed in the House of Lords on May 13.

The Southern Railway (Superannuation Fund) Bill, which was reported to the House of Lords with amendments on May 6, was read a third time with the amendments and passed in the House of Lords on May 14.

The Railway Clearing System Superannuation Fund Corporation Bill was reported, with amendments, to the House of Commons on May 6 from the Committee on Unopposed Bills (with report on the Bill). The Bill, as amended, and Report, were ordered to lie on the Table, and the Report to be printed. The Bill passed the Report stage in the Commons on May 15.

E.P.T. at 100 per cent.

In the course of a statement circulated to stockholders of Imperial Chemical Industries Limited, which will take the place of his speech at the annual meeting on May 29, Lord McGowan, the Chairman of the company, referred at some length to the disadvantages of the Excess Profits Tax. He said that while he fully believed in maximum taxation as a vital necessity in the present war economy and had never been among those who had cavilled at an E.P.T. rate of 100 per cent., yet he could foresee difficulties and disadvantages in the continuance of such a rate The most important of these—and the concession made in the last Budget did not afford any relief—arose in that the taxpayer was obliged to hand over the whole of his excess profits in cash while such profits were certain to be locked up to a great extent in increased stocks at higher prices and in larger book debts.

This rate of 100 per cent. did not enable the taxpayer to provide adequate depreciation on capital expended in the national interest on purely war-time projects. The Finance Acts contained provisions designed to meet this difficulty, but they did not entirely remove the risk of capital loss. Every taxpayer should be entitled to a lien on his own excess profits to the full extent necessary to write off capital so expended—much of it at the direct request of the Government.

The effect of special war taxation on his company's results for 1940 might be illustrated by the fact that 70 per cent. of the consolidated income was required for taxation, 25 per cent. for net dividends to stockholders, and only 5 per cent. went to free reserves of the company and its subsidiaries. For 1939 these figures were respectively 51 per cent., 35 per cent., and 14 per cent.

CRAVEN BROTHERS (MANCHESTER) LIMITED.—At the recent annual meeting, the Chairman and Managing Director, Mr. J. R. Greenwood, said that the company had been fully engaged throughout the year under review and output had been considerably greater than the previous year's high record. Total sales turnover had been substantially augmented by deliveries from sub-contractors, but the appreciable increase in the cost of manufacture due to rising wages and higher prices of material, and the inclusion of other expenses peculiar to wartime conditions, made production costs higher than originally estimated on long-term contracts which had been accepted at fixed prices.

STEWARTS AND LLOYDS LIMITED.—At the ordinary general meeting of Stewarts and Lloyds Limited on May 20 the Chairman of the company, Mr. A. C. Macdiarmid, said that it would be appreciated that it was not possible for him to make the usual detailed review of the company's activities. He could, however, give an assurance that the whole energies and effort of the company were concentrated both at home and in the dominions on work of importance in connection with the war. It was evident from the accounts that the company's affairs were sound.

QUESTIONS IN PARLIAMENT

Petrol Rationing

Mr. J. F. E. Crowder (Finchley—C.), on May 6, asked the Secretary for Petroleum whether, in order to restrict the use of petrol, he would consider reducing the issue of supplementary coupons to private motorcars over 20 h.p. employed for private and business purposes, and thus discourage their use.

Mr. Geoffrey Lloyd (Secretary for Petroleum) replied that the scale of allowances was already framed so as to discourage the use of high-powered cars. This principle could not, however, be carried beyond a certain point in view of the limited number of low horse-powered cars now available.

London-Newcastle Train Accident

Captain L. F. Plugge (Chatham—C.), on May 6, asked the Parliamentary Secretary to the Ministry of Transport whether he could now make any statement as to the cause of the fatal fire on the London-Newcastle train in which six schoolboys lost their lives.

Colonel J. J. Llewellin (Parliamentary Secretary to the Ministry of Transport) in a written reply stated: The official enquiry into this accident began yesterday. Until it is concluded I am not in a position to make any statement. I am, however, sure that I am expressing the feelings of the House in conveying our sympathy to the relatives of the boys who so regrettably lost their lives.

De-Casualisation of Dock Labour

Mr. G. Muff (Kingston-upon-Hull East—Lab.) on behalf of Mr. W. Windsor (Kingston-upon-Hull Central—Lab.), on May 7, asked the Parliamentary Secretary to the Ministry of Transport if there had been any appreciable improvement in the turn-round of ships at Liverpool and Glasgow as a result of the de-casualisation of dock labour.

Colonel Llewellin (Parliamentary Secretary to the Ministry of Transport): The schemes have been in operation for a few weeks only, but give definite indications that they are helping to improve turn-round.

Canals

Mr. G. Le M. Mander (Wolverhampton East—Lib.), on May 7, asked the Parliamentary Secretary to the Ministry of Transport if he would consider the advisability of taking steps to separate canals from railway control and to bring all the canal systems of the country into one unified organisation.

Colonel J. J. Llewellin (Parliamentary Secretary to the Ministry of Transport): We shall, of course, consider any suggestion that would materially improve the immediate efficiency and carrying capacity of the canals, but I doubt whether it is desirable at the present time to attempt to carry through the major reorganisation suggested by my hon. friend.

Facilities for Parents of Evacuees

Sir William Wayland (Canterbury—C.), on May 13, asked the Parliamentary Secretary to the Ministry of Transport if the reduced priced railway tickets issued to parents to visit their evacuated children in Wales and elsewhere from the South of England could be extended from three days to a week, as the present time limit permitted parents to remain with their children only one day as two days were taken up travelling.

Colonel Llewellin (Parliamentary Secretary to the Ministry of War Transport) wrote in reply: I am afraid that we are unable further to extend the period of availability of these special tickets.

Petrol Rationing

Mr. W. Leach (Bradford Central—Lab.), on May 13, asked the Secretary for Petroleum, if his attention had been drawn to the increased danger to our petrol supplies; and whether he was now prepared to place some restrictions on pleasure motoring and the use of motorcars for shopping, domestic, and other non-essential purposes which caused much public irritation.

Mr. Geoffrey Lloyd (Secretary for Petroleum) replied that Mr. Leach would no doubt have seen the recent announcement that reductions are to be made in the supplementary allowances for the next rationing period, June and July.

Reserve Stocks of Coal

Mr. D. R. Grenfell (Secretary for Mines) in a written reply to a question by Colonel H. W. Burton (Sudbury—C.), on May 13, stated that the Mines Department was aware of the extent to which stocks of coal had been depleted in various parts of the country and the Department was now engaged upon a programme for increasing production so as to enable stocks to be set aside during the summer and thus to provide for the needs of all classes of consumers during next winter. The general plan was designed to lay aside greater reserves of coal than at the beginning of last winter. The main problem now was to secure a sufficient increase of output to enable those stocks to be built up.

Price of Secondhand Cars

Mr. R. W. Sorensen (Leyton West—Lab.), on May 14, asked the Parliamentary Secretary to the Ministry of War Transport whether he was aware that prices for used motorcars had risen in some cases 35 per cent. above makers' list prices; that the motor trade admitted that was due primarily to speculation in expectation of future demand; and whether, as that might lead to the payment of war damage compensation based on inflated values, he would reconsider introducing some control of prices for used motorcars.

Colonel J. J. Llewellin (Parliamentary Secretary to the Ministry of War Transport) in reply stated that there had, of course, been cases in which purchasers of second hand cars had been prepared to buy them at prices considerably above makers' list prices. He was not aware of what Mr. Sorensen suggested in the second part of his question. In regard to the third part, he had nothing to add to what Lt.-Colonel Moore-Brabazon said in answer to a similar question on April 9.

Seats for Women Bus Conductors

Sir Irving Albery (Gravesend—C.), on May 14, asked the Parliamentary Secretary to the Ministry of Transport whether any kind of seating arrangements were provided for women bus conductors.

Colonel J. J. Llewellin (Parliamentary Secretary to the Ministry of War Transport) replied that, as a rule, no special seating arrangements were provided; in general there was no room to construct a seat on the platform of a bus. A conductress was, however, allowed to occupy a vacant seat in the bus provided that using it did not interfere with the execution of her duties.

Tram and Bus Return Tickets

Mr. D. Frankel (Mile End—Lab.), on May 14, asked the Parliamentary Secretary to the Ministry of Transport whether he was aware that the present rule whereby return tickets on buses and trams were available only on the day of issue, was creating hardship in many cases owing to the present emergency; and whether representations could be made to transport undertakings in favour of a more flexible arrangement, as was done in certain cases with respect to workmen's tickets.

Colonel J. J. Llewellin (Parliamentary Secretary to the Ministry of War Transport) said that if Mr. Frankel would send him particulars of cases where hardship arose, he would certainly look into them.

London Transport Salaries

Mr. J. Parker (Romford—Lab.), on May 14, asked the Parliamentary Secretary to the Ministry of War Transport what salaries were paid to the Chairman, Vice-Chairman, and members of the London Passenger Transport Board; and what changes had been made since the reply given on May 22, 1933.

Colonel J. J. Llewellin (Parliamentary Secretary to the Ministry) in a reply circulated the following figures:—

	May 22, 1933	At present	
	£	£	
Lord Ashfield ...	12,500	12,500	
Mr. Frank Pick ...	10,000	—	Appointment expired 17.5.40
Mr. John Cliff ...	750*	3,000†	
Sir Henry Maybury	750*	750*	
Mr. P. Ashley Cooper	750*	750*	
Sir J. W. Gilbert ...	750*	—	Died 22.12.34
Mr. Charles Latham	—	750*	Appointed 21.2.35
Sir E. J. Holland ...	750*	—	Appointment expired 17.5.39
Col. Forrester Clayton	—	750*	Appointed 18.5.39

* Part-time members.

† Appointed full-time member 4.2.35 at £1,500; increased to £3,000 from 1.5.40 when, consequent upon the retirement of Mr. Pick, Mr. Cliff undertook additional duties as Head of the Staff & Staff Welfare Department with the title of Executive Officer for Staff & Staff Welfare.

Notes and News

Holidays in Eire.—The Irish Tourist Association, Dublin, is launching an advertising campaign to encourage early holidays in Southern Ireland. Advertising will also appear in Northern Ireland newspapers advocating an Eire holiday break for war workers.

Mersey Docks & Harbour Board.—The board is open to receive offers of loans of £20 and upwards on the security of its bonds at interest of 3¼ per cent. for periods of three to five years, and at 3½ per cent. for five years or such longer time as may be arranged.

Work on Trans-Saharan Railway Begun.—A Reuters message from Vichy states that work upon the construction of the 1,000 odd desert miles of the Trans-Saharan Railway has now begun, and that 3,000-h.p. diesel locomotives will be used for the haulage of what will mainly be goods traffic.

Irish Tourist Association.—At a recent meeting of the Irish Tourist Association, the sympathy of the directors was expressed for the people of Belfast and other bombed areas in Northern Ireland. The association has decided to offer the Ulster Tourist Association every facility and co-operation which that body may require in restoring its normal services to the tourist industry.

Road Accidents in April.—The Director General of War Transport states that the number of persons reported to have died in Great Britain during the month of April, 1941, as a result of road accidents was 726, compared with 451 in April, 1940. Of the total fatal accidents 247 (against 178) occurred during darkness, and 479 (against 273) at other times. Adult pedestrians killed number 255, compared with 192.

British Continental Airways Limited.—A general meeting of the members of this company is to be held on June 12 to receive an account showing how the winding-up has been conducted and the property of the company disposed of. This meeting, at 4-6, Throgmorton Avenue, London, E.C.2, will also determine by extraordinary resolution the disposal of the books and documents of the company and of the liquidator (Mr. E. Cassleton Elliott).

Agreed Charges.—Forty-four more applications for the approval of agreed charges under the provisions of Section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Railway Rates Tribunal. Notices of objection to any application must be filed on or before June 3, 1941.

Entre Rios Railways Co. Ltd.—Holders of the 4 per cent. and 5 per cent. debenture stock are to meet on June 9 to consider a scheme of arrangement providing for the modification of debenture holders' rights. A moratorium on the debenture issues of the company was extended in May, 1940, to July 1, 1941.

Jugoslav State Railways in 1940.—Provisional statistics indicate that receipts of the Jugoslav State Railways during the first ten months of 1940 amounted to 3,045,000,000 dinars, compared with 2,074,000,000 in the preceding comparable period. Freight transported totalled 11,600,000 tons up to the end of June, against 10,200,000 during the first six months of 1939.

South Wales Transport Co. Ltd.—Owing to the ownership of the Mumbles Railway & Pier Undertaking of the South Wales Transport Co. Ltd., and in view of the Government's recent pronouncement on the publication of accounts of railway companies, it is not the intention to publish the South Wales Transport Company's report and accounts in respect of the past year.

Fifty Years a Railway Hotel.—The Palace Hotel in Aberdeen, built in 1874 by Messrs. Pratt & Keith, was taken over by the former Great North of Scotland Railway on May 16, 1891. Since then the Palace has remained a railway-owned hotel and nowadays forms an important link in the L.N.E.R. chain of 23 hotels throughout England and Scotland. When the Great North took possession of the Palace, it was modernised. Electric light, still something of a novelty in those days, was installed, and a covered way provided to the station. A roof was built over the entire length of the main north platform, which was connected to the various parts of the hotel by a covered bridge over the railway tracks and two hydraulic lifts in the building. In August, 1891, the rejuvenated Palace was re-opened and the financial success it immediately achieved must have encouraged the Great North to further enterprise in the hotel field, for but two years later powers were obtained to build what was to become an equally popular railway-owned hotel at Cruden Bay.

Irish Traffic Returns

IRELAND		Totals for 18th Week			Totals to Date		
		1941	1940	Inc. or Dec.	1941	1940	Inc. or Dec.
		£	£	£	£	£	£
Belfast & C.D. (80 miles)	pass.			No returns to hand			
	goods						
	total						
Great Northern (543 miles)	pass.			No returns to hand			
	goods						
	total						
Great Southern (2,049 miles)	pass.	37,236	34,848	+ 2,388	638,798	538,219	+ 100,579
	goods	54,042	53,753	+ 289	914,050	815,641	+ 98,409
	total	91,278	88,601	+ 2,677	1,552,848	1,353,860	+ 198,988
L.M.S.R. (N.C.C.) (247 miles)	pass.			No returns to hand			
	goods						
	total						

British and Irish Railway Stocks and Shares

Stocks	Highest 1940	Lowest 1940	Prices May 20, 1941	Rise/Fall
G.W.R.				
Cons. Ord.	52	22¼	34	—
5% Con. Pref.	103¼	58	98½	—
5% Red. Pref. (1950)	105½	88	103	—
4% Deb.	107½	90½	110½	—
4½% Deb.	108½	96½	113	—
4½% Deb.	114½	96	116½	—
5% Deb.	124	106	130	—
2½% Deb.	66½	57	66	—
5% Rt. Charge	117½	97	127½	—
5% Cons. Guar.	117	90½	125½	—
L.M.S.R.				
Ord.	24⅝	9	12¼	−⅛
4% Pref. (1923)	60½	21⅛	38½	+1
4% Pref.	70⅜	35	56½	—
5% Red. Pref. (1955)	94½	60	84½	—
4% Deb.	101⅜	81	102½	—
5% Red. Deb. (1952)	109½	102	108	—
4% Guar.	93⅜	65	95½	—
L.N.E.R.				
5% Pref. Ord.	8⅜	1½	2⅜	—
Def. Ord.	4⅜	1⅛	1⅜	—
4% First Pref.	60	20	37½	+1
4% Second Pref.	22⅝	6½	13	—
5% Red. Pref. (1955)	80	34½	62½	—
4% First Guar.	86½	56	85½	+1
4% Second Guar.	77½	37	70½	+1
3% Deb.	73½	54½	76	—
4% Deb.	97⅜	74	100½	—
5% Red. Deb. (1947)	107	96⅜	104	—
4½% Sinking Fund Red. Deb.	104	98	102½	—
SOUTHERN				
Pref. Ord.	79	34	50½	—
Def. Ord.	22½	7	10	—
5% Pref.	104½	58⅜	93½	—
5% Red. Pref. (1964)	105	85	100½	—
5% Guar. Pref.	116⅜	90	126	—
5% Red. Guar. Pref. (1957)	114⅞	94	113½	—
4% Deb.	106⅜	84½	109½	—
5% Deb.	122½	100	128½	—
4% Red. Deb. (1962–67)	106	96½	106	—
4% Red. Deb. (1970–80)	106⅜	93	106	—
FORTH BRIDGE				
4% Deb.	95½	87	93½	—
4% Guar.	93½	81½	91½	—
L.P.T.B.				
4½% "A"	116	103	119½	—
5% "A"	121½	107	126½	—
4½% "T.F.A."	105½	101	102½	—
5% "B"	116	102	112½	—
"C"	65½	24	31	—
MERSEY				
Ord.	26	18½	20½	—
4% Perp. Deb.	92½	86½	92½	—
3% Perp. Deb.	68	63	67½	—
3% Perp. Pref.	57	50½	53½	—
IRELAND				
BELFAST & C.D.				
Ord.	4	3	4	—
G. NORTHERN				
Ord.	4½	1½	6	+1½
G. SOUTHERN				
Ord.	12½	4	6½	−½
Pref.	15½	6	7	—
Guar.	36	15	24	+5
Deb.	55½	40	50	+3

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RAILWAY AND OTHER REPORTS

Argentine Great Western Railway Co. Ltd.—Six months' arrears of interest to October 1, 1936, are to be paid on the 5 per cent. debenture stock. In August last payment was made of six months' arrears of interest to April 1, 1936.

Midland Railway Co. of Western Australia Ltd.—The directors have authorised an interim payment of interest on the second mortgage cumulative income debenture stock on account of the year ending June 30, 1941, of 2 per cent., less tax (same).

Buenos Ayres & Pacific Railway Co. Ltd.—The directors are paying a half-year's arrears of interest to July 1, 1936, on the £7,942,673 of 4½ per cent. consolidated debenture stock outstanding. Six months' arrears of interest to January 1, 1936, were paid in August last.

Manx Electric Railway Co. Ltd.—Gross receipts in the year to September 30, 1940, amounted to £5,657, against £28,874, and working expenses were reduced from £22,556 to £13,006, the net loss being £7,349, against a profit of £6,318 in the previous year. Adding debit balance brought forward of £10,095 makes a debit balance to be carried forward of £17,444. The number of passengers was 69,004, compared with 489,621 in the previous year.

Bombay, Baroda & Central India Railway Company.—The directors will propose, at the general meeting to be held in July, the payment, in addition to the half year's guaranteed interest of £1 10s. per cent., of a final dividend for the financial year ended March 31, 1941, of £1 10s. per cent., making a total payment in July next of £3 per cent., less tax. The return for the whole year will be £6 per cent., less tax, the same as for the previous year.

Temiskaming & Northern Ontario Railway Company.—An increase of more than $300,000 in net profits for the fiscal year ended March 31, 1940, was shown in the annual report tabled in the Ontario Legislature on April 3 by Provincial Secretary Harry Nixon. Net profit was $1,154,719, compared with $841,702. The commission reported operating revenues of $5,457,400, an increase of $416,149, and operating expenses of $3,748,728, an increase of $111,101. The report noted an operating ratio of 68·69 per cent. in 1940, against 72·15 in 1939. Operating expenses increased 3·05 per cent., and operating revenues by 21·73 per cent.

Grand Junction Company.—Net profit for the year to March 31 last was £21,700, against £30,258 for previous year. Ordinary dividend is 2 per cent., compared with 3 per cent.

Peruvian Corporation Limited.—Holders of the 6 per cent. first mortgage debentures will on June 2 be paid £2 per cent. on account of interest. This payment will be in full discharge of balance coupon No. 92, representing the unpaid balance of the instalment of interest due on April 1, 1936. Payment, less tax, will be made by Coutts & Co., 15, Lombard Street, E.C., against delivery up of the balance coupon.

Norfolk & Western Railway Company.—In 1940 gross railway operating revenues were $105,228,621, an increase of $12,113,493, or 13·01 per cent. The operating expenses of $57,580,324 showed an advance of $6,461,936 or 12·64 per cent. Net railway operating income ($33,254,232) showed an improvement of $1,595,016, and the gross income of $34,142,263 from all sources was $1,346,698 higher. Interest charges, etc., amounted to $2,758,287, leaving a net income of $31,383,976, against $30,001,238. Dividends of $15 a share were paid upon the common stock, the same as in 1939.

Rhondda Transport Co. Ltd.—This company, which is controlled by the British Electric Traction Co. Ltd., earned in 1940, after providing for deferred maintenance £4,900 (nil), for war damage insurance £3,000 (nil), for taxation £60,000 (£30,000), etc., a net profit of £21,709, against £41,527. Dividend for the year is 9 per cent., free of tax, against 10 per cent., free of tax, and the amount carried forward is £9,024, against £10,826 brought in.

Northern General Transport Co. Ltd.—The directors of this subsidiary of the London & North Eastern Railway Company and of British Electric Traction Co. Ltd. recommend a dividend of 10 per cent. (the same) for the year 1940. Total revenues for the year amounted to £822,635, against £804,462, and the total expenses, including renewals, taxation, and war damage insurance, to £663,533, leaving a surplus on working of £159,102 compared with £178,315. Allocations to reserve, £50,000, and to employees' assistance fund, £3,000, are the same, and the amount carried forward is £75,726, against £72,232 brought in.

Keighley-West Yorkshire Services Limited.—For the year ended September 30 last this joint undertaking of Keighley Corporation and the West Yorkshire Road Car Co. Ltd. showed gross receipts totalling £46,443, and net profit of £16,981. The latter sum is divided equally between the two owners.

Babcock & Wilcox Limited.—Profits for 1940 were £717,347, against £756,663, both after writing off war losses but before providing for taxation. The final ordinary dividend of 6 per cent. again makes 10 per cent. for the year, and the bonus of 1 per cent. is repeated.

Colvilles Limited.—Trading profit for the year 1940 was £1,132,270, against £1,058,462 in 1939 and dividends from subsidiaries were £96,416 compared with £147,522. Depreciation again takes £350,000 and tax provision is £200,000 larger at £800,000. A final ordinary dividend of 5 per cent. again makes 8 per cent. for the year, but the carry forward is £119,858 compared with £271,523 brought in.

Canadian Locomotive Co. Ltd.—For the year 1940 net profit was $28,310 after depreciation, taxes, and bond interest, compared with net loss of $147,880 for 1939. Operating profit was $485,705 (against operating loss of $43,004). The company delivered 23 locomotives during the year. Late in 1940 the company entered into an agreement with the Government to manufacture munitions. This has necessitated an addition to the shops.

Stewarts and Lloyds Limited.—The 1940 accounts show trading profits, etc., of £1,972,433, against £1,991,562, and after allowing for directors' fees, staff fund contributions, debenture service, £571,734 (against £539,790) for depreciation, and £150,000 (against nil) for reserve for war damage insurance premiums, there was a net profit of £1,008,361, against £1,213,740. A sum of £350,000 (£500,000) is allocated to contingencies reserve, and the deferred dividend is again 12½ per cent., less tax. The amount carried forward is £182,689, against £181,809 brought in.

Railway Stock Market

Activities in the City have centred on making London's War Weapons Week a success, and consequently, quiet and inactive market conditions have ruled. At one time this tended to result in a moderate reduction in security values, but absence of selling had a beneficial influence on sentiment, and the general undertone was steady. The prevailing view is that before long the upward movement in British Funds and other leading securities of the fixed interest-bearing type is likely to be resumed, granted that the war and international news is not of an unfavourable character. Demand has continued for home railway prior charges, which, where changed, have in most cases moved in favour of holders, although this week, gains were moderate on balance. Following an easier trend, junior stocks became firmer, the belief having persisted that, bearing in mind the vital part of the railways in the war effort, stockholders can expect equitable treatment, and that the minimum revenue guarantee is likely to be maintained. Publication of the results for the current half-year's working will naturally be awaited with considerable interest; the general assumption is that interim dividends are likely to be at the same rates as last year. It is realised that before the position and outlook can be clarified, it will be necessary to know details of the long-awaited special scheme for war damage insurance in respect of the railways and public utility undertakings, as well as the situation in relation to the important proposals for co-ordinating transport during the war. The wage increase decided upon by the National Staff Tribunal was not unexpected in the market, and had no perceptible influence on security values.

Great Western 5 per cent. preference stock has further improved to 99½; the 4 per cent. debentures held their recent rise to 111, while the guaranteed issue was 126. On the other hand, Great Western ordinary stock was fractionally lower at 33⅛. Rather more attention was given to some of the higher yielding preference stocks, and the L.M.S.R. 1923 issue improved a point to 39; the 4 per cent. senior preference was unchanged on balance at 57, and the guaranteed was again 96, while the 4 per cent. debentures were in request up to 103½. L.M.S.R. ordinary lost an earlier improvement, but at 12⅝ was unchanged as compared with a week ago. Among Southern issues, the 5 per cent. preference eased to 93½, despite the attractive yield; the 4 per cent. debentures kept their recent rise to 109½. This railway's deferred stock was fractionally lower at 9¾, but at 50½ the preferred more than maintained the improvement recorded a week ago. L.N.E.R. issues also showed only small movements. The first preference was bought in view of the apparently generous yield, and made the slightly better price of 38, which incidentally is one point below L.M.S.R. 1923 preference. L.N.E.R. second preference at 12¾ was unchanged on the week; the first guaranteed remained at 85; the second guaranteed was fractionally better at 70½. London Transport "C" stock was maintained in price.

Despite hopes of improved trade with South America, Argentine railway securities have been dull, sentiment having been governed mainly by the decline in B.A. Western debentures on the moratorium proposals, which had not been generally expected in the market. This railway's 4 per cent. stock was marked down to 28, and the 4½ per cent. preference was lower at 8¾. Quotations for securities of other Argentine railways were virtually maintained, however, although B.A. Gt. Southern 4 per cent. debentures declined fractionally to 38½. Elsewhere, San Paulo ordinary stock was within a point of the price current a week ago. Activity was shown in Canadian Pacific issues.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

	Railways	Miles open 1940-41	Week Ending	Traffic for Week: Total this year	Traffic for Week: Inc. or Dec. compared with 1940	No. of Weeks	Aggregate Traffics to Date: Totals: This Year	Aggregate Traffics to Date: Totals: Last Year	Aggregate Traffics to Date: Increase or Decrease	Shares or Stock	Prices: Highest 1940	Prices: Lowest 1940	Prices: May 20, 1941	Yield % (See Note)
				£	£		£	£	£					
South & Central America	Antofagasta (Chili) & Bolivia	834	11.5.41	14,650	– 1,510	19	329,050	358,160	– 29,110	Ord. Stk.	11¼	3½	4½	Nil
	Argentine North Eastern	753	10.5.41	ps. 80,200*	– ps. 99,600	45	ps. 6,421,000	ps. 6,846,000	– ps.425,000	,,	3¾	1	2	Nil
	Bolivar	174	Apr. 1941	3,912	– 738	18	14,932	16,240	– 1,308	6 p.c. Deb.	6½	5	6½	Nil
	Brazil	—	—	—	—	—	—	—	—	Bonds	8	5	5	Nil
	Buenos Ayres & Pacific	2,801	10.5.41	ps.1,555,000	+ps.203,000	45	ps.64,335,000	ps. 63,061,000	+ps.1,274,000	Ord. Stk.	4½	1	2	Nil
	Buenos Aires Central	190	18.1.41	$70,400	– $20,200	29	$2,477,400	$2,994,900	– $517,500	—	—	—	—	—
	Buenos Ayres Great Southern	5,082	10.5.41	ps.2,803,000	+ps.668,000	45	ps.100,212,000	ps.106.994,000	– ps.6,782,000	Ord. Stk.	10⅜	3	4	Nil
	Buenos Ayres Western	1,930	10.5.41	ps.1,012,000	+ps.226,000	45	ps.35,093,000	ps. 35,824,000	– ps. 731,000	,,	8⅝	2	3	Nil
	Central Argentine	3,700	10.5.41	ps. 2,095,350	+ps.332,050	45	ps.72,890,700	ps. 79,749,250	– ps.6,858,550	,,	8¾	2	2¾	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	4	¼	1	Nil
	Cent. Uruguay of M. Video	972	10.5.41	27,550	+ 651	45	1,029,920	972,861	+ 57 059	Ord. Stk.	3¾	¼	1¾	Nil
	Costa Rica	188	Mar. 1941	18.817	– 3,304	39	136,720	158,217	– 21,497	Stk.	23½	14	15½	12⅞
	Dorada	70	Apl. 1941	12,500	+ 900	17	49,200	46,100	+ 3,100	1 Mt. Db	99	97½	98	6 1/16
	Entre Rios	808	10.5.41	ps. 109,100*	– ps.31,000	45	ps. 9,508,100	ps.10.698,600	– ps.1,190.500	Ord. Stk.	4	¼	1½	Nil
	Great Western of Brazil	1,016	10 .5.41	7,800	+ 400	19	194,100	226,500	– 32,400	Ord. Sh.	4/-	1/-	2/6	Nil
	International of Cl. Amer.	794	Mar 1941	$487,887	– $103,925	12	$1,444,383	$1,762,134	– $317,751	—	—	—	—	—
	Interoceanic of Mexico	—	—	—	—	—	—	—	—	1st Pref.	9d.	9d.	½	Nil
	La Guaira & Caracas	22¾	Apr. 1941	5.915	– 125	18	24.910	28.015	– 3,105	—	6	4	—	—
	Leopoldina	1,918	10 5.41	20,875	– 1,381	19	444,880	409,361	+ 35,519	Ord. Stk.	2 7/16	¼	½	Nil
	Mexican	483	7.5.41	ps. 266,700	+ps. 13,700	18	ps. 5,597,100	ps. 5,644,200	– ps. 47,100	,,	2/11¼	1/2	9d.	Nil
	Midland of Uruguay	319	Mar. 1941	13,106	– 209	39	107,795	94,539	+ 13,256	—	—	—	—	—
	Nitrate	386	30.4.41	3,209	– 5,854	18	34,186	65.025	– 30,839	Ord. Sh.	2¾	1½	2 5/16	5 11/16
	Paraguay Central	274	3.5.41	$3,373,000	+ $2,000	44	$142,471,000	$140,714,000	+ $1,757,000	Pr. Li. Stk.	41	36	30½	19 11/16
	Peruvian Corporation	1,059	Apr. 1941	68.480	– 5,352	43	646,466	680,483	– 34,017	Pref.	4	1	2	Nil
	Salvador	100	22.2.41	£26,787	– £17.551	34	£490,660	£615,137	– £124,477	—	—	—	—	—
	San Paulo	153½	11.5.41	42,250	+ 5,695	19	681,750	657,017	+ 24,733	Ord. Stk.	50	23	26½	7 5/16
	Taltal	160	Apr. 1941	2,310	– 775	43	27,450	26,220	+ 1,230	Ord. Sh.	15/1½	3/8	3/8	Nil
	United of Havana	1,346	10.5.41	32,292	+ 2,513	45	1,088,095	1,114,789	– 26,694	Ord. Stk.	⅜	¼	½	Nil
	Uruguay Northern	73	Mar. 1941	1,166	– 239	39	10,320	9,995	+ 325	—	—	—	—	—
Canada	Canadian National	23,633	7.5.41	1,150,859	+ 237,110	19	19,020,332	15,121,805	+ 3,898,527	—	—	—	—	—
	Canadian Northern	—	—	—	—	—	—	—	– 4 p.c.	Perp. Dbs.	86	68	92	4⅜
	Grand Trunk	—	—	—	—	—	—	—		4 p.c. Gr.	105¾	95 11/16	101¼	3 15/16
	Canadian Pacific	17,153	14.5.41	846,800	+ 205,000	20	14,081,800	10,806,000	+ 3,275,800	Ord. Stk.	9 7/16	4⅞	9	Nil
India‡	Assam Bengal	1,329	30.4.41	45,187	+ 6,529	4	135,060	120,437	+ 14,623	Ord. Stk.	99⅜	71	100	3
	Barsi Light	202	31.3.41	5,685	+ 2,318	52	167,280	127,072	+ 40,208	—	—	—	—	—
	Bengal & North Western	2,086	30.4.41	273,900	– 13,992	4	273,900	287,892	– 13,992	Ord. Stk.	283	234	300	5 5/16
	Bengal Dooars & Extension	161	Sept. 1940	14,625	+ 508	46	78,405	66,243	+ 12,162	,,	—	—	—	—
	Bengal-Nagpur	3,269	28.2.41	215,100	– 39,983	9	8,144,659	7,427,779	+ 716,880	,,	96	83⅞	100½	4
	Bombay, Baroda & Cl. India	2,986	10.5.41	297,000	– 27,750	6	1,273,200	1,220,100	+ 53,100	,,	108	99	108½	5½
	Madras & Southern Mahratta	2,939	10.3.41	187,950	+ 17,984	50	5,805 345	5,517.048	+ 288,297	,,	104	97⅞	104½	7 1/16
	Rohilkund & Kumaon	571	30.4.41	62,775	– 6,683	4	62,775	69,458	+ 6,683	,,	284	238	293	5 1/16
	South Indian	2,500	20.2.41	133,540	+ 20,609	48	4,069,454	3,620,626	+ 448,828	,,	93¾	83	97½	4⅛
Various	Beira	204	Mar. 1941	73,158	—	26	429,691	—	—	—	—	—	—	—
	Egyptian Delta	610	10.3.41	7,543	+ 1,998	50	231,577	203,467	+ 28,110	Prf. Sh.	7/10½	⅜	⅜	Nil
	Kenya & Uganda	1,625	—	—	—	—	—	—	—	—	—	—	—	—
	Manila	—	—	—	—	—	—	—	—	B. Deb.	53	44½	45½	7 11/16
	Midland of W. Australia	277	Jan. 1941	14.629	+ 900	30	105,753	90,657	+ 15,096	Inc. Deb.	88	80	87½	6⅝
	Nigerian	1,900	22.2.41	74,093	+ 16,001	30	2,056,584	1,856,487	+ 200,097	—	—	—	—	—
	Rhodesia	2,442	Mar. 1941	465,823	—	26	2,853,899	—	—	—	—	—	—	—
	South Africa	13,287	5.4.41	714,673	+ 38,417	1	714,673	676,256	+ 38,417	—	—	—	—	—
	Victoria	4,774	Dec. 1940	1,009,886	+ 65.971	26	—	—	—	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ¼ Argentine traffics are given in pesos
* Traffic affected by floods. ‡ Receipts are calculated @ 1s. 6d. to the rupee